

N61165.AR.005697
CNC CHARLESTON
5090.3a

UNDERGROUND STORAGE TANK (UST) ASSESSMENT REPORT FOR BUILDING NS-28
CNC CHARLESTON SC
03/17/1997
SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

South Carolina Department of Health and Environmental Control (S.C.D.H.E.C.)
Underground Storage Tank (UST) Assessment Report

Date Received

State Use Only

Submit Completed Form to:
UST Regulatory Section
SCDHEC
2600 Bull Street
Columbia, South Carolina 29201
Telephone (803) 734-5331

I. OWNERSHIP OF UST(S)

Agency/Owner: Southern Division, Naval Facilities Engineering Command, Caretaker Site Office

Mailing Address: P.O. Box 190010

City: N. Charleston State: SC Zip Code: 29419-9010

Area Code: 803 Telephone Number: 743-9985 Contact Person: LCDR Paul Rose

II. SITE IDENTIFICATION AND LOCATION

Site I.D. #: Unregulated

Facility Name: Charleston Naval Base Complex, Building NS 28

Street Address: Thompson Avenue

City: North Charleston, 29405-2413 County: Charleston

III. CLOSURE INFORMATION

Closure Started: 3 Dec 1996

Closure Completed: 17 Mar 1997

Number of USTs Closed: 2

N/A

SPORTEENVDETCHASN

Consultant

UST Removal Contractor

IV. CERTIFICATION (Read and Sign after completing entire submittal)

I certify that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

LCDR Paul Rose

Name (Type or Print)



Signature

V. UST INFORMATION

- A. Product.....
- B. Capacity.....
- C. Age.....
- D. Construction Material.....
- E. Month/Year of Last Use.....
- F. Depth (ft.) To Base of Tank.....
- G. Spill Prevention Equipment Y/N.....
- H. Overfill Prevention Equipment Y/N.....
- I. Method of Closure Removed/Filled.....
- J. Visible Corrosion or Pitting Y/N.....
- K. Visible Holes Y/N.....

NS28A	NS28B	Tank 3	Tank 4	Tank 5	Tank 6
Fuel oil	Fuel oil				
10,000 gal	4,000 gal				
1969	1982				
Steel	Fiberglass				
Unk	Unk				
11'	10'		--	--	
N	N				
N	N				
R	R				
Y	N				
N	N				

- L. Method of disposal for any USTs removed from the ground (attach disposal manifests)

USTs NS28A and NS28B were removed, drained, cut open at both ends, and cleaned with a steam cleaner. NS28A was cut up for recycling as scrap metal. NS28B was cut up and disposed of at a local municipal landfill. (See Attachment III.)

- M. Method of disposal for any liquid petroleum, sludges, or waste waters removed from the USTs (attach disposal manifests)

The waste water from both tanks was recycled. The sludge from both tanks was found too thick to be pumped into our collection facility and was shipped out as non-regulated sludge waste.

- N. If any corrosion, pitting, or holes were observed, describe the location and extent for each UST

UST NS28A was corroded and pitted, but no holes were found. UST NS28B was a fiberglass tank. It had no corrosion, pitting, or holes.

VI. PIPING INFORMATION

- A. Construction Material.....
- B. Distance from UST to Dispenser.....
- C. Number of Dispensers.....
- D. Type of System P/S.....
- E. Was Piping Removed from the Ground? Y/N....
- F. Visible Corrosion or Pitting Y/N.....
- G. Visible Holes Y/N.....
- H. Age.....

Note 1: The tanks provided fuel oil to Building NS 28.

- I. If any corrosion, pitting, or holes were observed, describe the location and extent for each line.

The piping for UST NS28A had surface corrosion and pitting, but no holes. UST NS28B's piping was in very good condition and had no corrosion, pitting, or holes.

NS28A	NS28B	Tank 3	Tank 4	Tank 5	Tank 6
Steel	Steel				
10' See note 1	100' See note 1				
1 See note 1	1 See note 1				
S	S				
Y	Y See History	--	--		
Y	N				
N	N				
1969	1982				

VII. BRIEF SITE DESCRIPTION AND HISTORY

Building NS 28 is the former Bachelor Officer's Quarters on Naval Base Charleston. It is currently occupied by the US Border Patrol. USTs NS28A and NS28B provided fuel oil to the building.

UST NS28A was an unregulated, 10,000 gallon, steel tank. The tank and piping removed from the excavation were found to be in sound condition even though corroded and pitted. A set of abandoned piping found on the site suggests that the original piping was replaced due to failure at an unknown date. These pipes were severely corroded and open at both ends. Elevated levels of Polynuclear Aromatic Hydrocarbons (PAHs) were found in three of the four samples taken at this site. In soil sample SPORT 0278-2 and groundwater sample SPORT 0278-4, the PAH levels exceeded the Soil Screening Levels (SSLs). See Site Map 3.

UST NS28B was an unregulated, 4,000 gallon, fiberglass tank. This was a replacement tank. Research indicated UST NS28B to be of steel construction, but a fiberglass tank was found. The tank and piping were in very good condition, and all samples associated with them reported no appreciable levels of petroleum contaminates. The exception was soil sample 97CNS006-4, which had PAH hits below the Soil Screening Level. While excavating the pipelines, a set of abandoned vent, supply, and return pipes was found. Soil sample 97CNS006-3, taken beneath the abandoned supply and return piping, indicated elevated BTEX and PAH levels in this vicinity. To remove the impacted soil, the pipe run excavation was extended 8' x 7' x 5' (approximately 10 cubic yards). Soil sample SPORT 0312-1, taken at the bottom of the extended excavation, reported no discernable petroleum contaminant levels.

Approximately one-third of UST NS28B's piping was left in place due to interference from electrical conduit, unidentified piping, A/C units, and an above ground fuel oil tank. The piping passed an air pressure drop test before it was capped.

VIII. SITE CONDITIONS

Yes No Unk

A.	<p>Were any petroleum-stained or contaminated soils found in the UST excavation, soil borings, trenches, or monitoring wells? [28B abandoned pipe run] If yes, indicate depth and location on the site map.</p>	X	
B.	<p>Were any petroleum odors detected in the excavation, soil borings, trenches, or monitoring wells? If yes, indicate location on site map and describe the odor (strong, mild, etc.) [Various]</p>	X	
C	<p>Was water present in the UST excavation, soil borings, or trenches? If yes, how far below land surface (indicate location and depth)? UST 28A excavation, ~ 9.5' below GSL, ~ 20" deep UST 28B excavation, ~ 9' below GSL, ~ 6" deep</p>	X*	
D.	<p>Did contaminated soils remain stockpiled on site after closure? If yes, indicate the stockpile location on the site map. Name of DHEC representative authorizing soil removal: <hr/></p>	X**	
E.	<p>Was a petroleum sheen or free product detected on any excavation or boring waters? If yes, indicate location and thickness on the site map.</p>	X	

* Angular rock was used to fill the area covered by the groundwater. Geofabric was laid over the rock and then all soils from the excavations were returned to the pits. The exception was UST 28B's expanded abandoned pipe run excavation, which was filled with clean dirt.

** Soil from UST 28B's expanded abandoned excavation was sent to Detachment Charleston's bioremediation facility at Building 1601. Per conversation with DHEC, Mr. Tim Metten, and SouthDiv, Mr. Gabriel Magwood, petroleum contaminated soil may be removed from the excavation and stockpiled for disposal or remediation.

IX. SAMPLE INFORMATION

S.C.D.H.E.C. Lab Certification Number GEL - 10120, WPWC - 96018

Sample #	Location	Sample Type (Soil/Water)	Depth*	Date/Time of Collection	Collected By	OVA#
SPORT 0278-1	28A, East end of tank	Soil	~ 9'	12/17/96 0910	W. Nesbit	209.7 ppm
SPORT 0278-2	28A, South side of tank	Soil	~ 9'	12/17/96 1130	W. Nesbit	76.0 ppm
SPORT 0278-3	28A, West end of tank	Soil	~ 9'	12/17/96 1147	W. Nesbit	14.5 ppm
SPORT 0278-4	28A, Center of UST excavation	Water	~ 9.5'	12/17/96 1207	W. Nesbit	N/A —
SPORT 0278-5	28A, Dirt pile, composite	Soil	-	12/17/96 1310	W. Nesbit	1310.0 ppm
SPORT 0278-6	28A, Dirt pile, composite	Soil	-	12/17/96 1335	W. Nesbit	1335.0 ppm
SPORT 0288-1	28B, Center of UST excavation	Water	~ 9.5'	1/8/97 1420	W. Nesbit	N/A
SPORT 0288-2	28B, North end of tank	Soil	~ 9.5'	1/8/97 1441	W. Nesbit	411.0 ppm
SPORT 0288-3	28B, South end of tank	Soil	~ 9.5'	1/8/97 1500	W. Nesbit	629.0 ppm
SPORT 0288-4	28B, Dirt pile, composite	Soil	-	1/8/97 1515	W. Nesbit	Not Taken
97CNS 006-1	28B, Beneath vent pipe	Soil	36"	1/16/97 0915	W. Nesbit	105.0 ppm
97CNS 006-2	28B, Beneath supply & return pipe run couplings	Soil	28"	1/16/97 0940	W. Nesbit	0.0 ppm
97CNS 006-3	28B, Beneath end of abandoned piping	Soil	36"	1/16/97 1010	W. Nesbit	212.0 ppm
97CNS 006-4	28B, Beneath supply & return pipe run couplings	Soil	24"	1/16/97 1033	W. Nesbit	0 ppm
97CNS 006-5	28B, Beneath supply & return 45° elbow	Soil	24"	1/16/97 1100	W. Nesbit	0 ppm
97CNS 006-6	28B, Beneath vent pipe coupling	Soil	24"	1/16/97 1117	W. Nesbit	78.0 ppm
97CNS 006-7	28B, Beneath supply & return 45° elbow	Soil	24"	1/16/97 1135	W. Nesbit	2395.0 ppm
97CNS 006-8	28B, Beneath supply & return piping at building 28	Soil	36"	1/16/97 1150	W. Nesbit	265.0 ppm
	Continued on next page...					

* = Depth Below the Surrounding Land Surface

XI. RECEPTORS

Yes No

<p>A. Are there any lakes, ponds, streams, or wetlands located within 1000 feet of the UST system? [28A - 336' from Cooper R., 28B - 423' from Cooper R.]</p> <p>If yes, indicate type of receptor, distance, and direction on site map.</p>	<input checked="" type="checkbox"/> X	
B. Are there any public, private, or irrigation water supply wells within 1000 feet of the UST system? <p>If yes, indicate type of well, distance, and direction on site map.</p>	<input checked="" type="checkbox"/>	
C. Are there any underground structures (e.g., basements) located within 100 feet of the UST system? <p>If yes, indicate the type of structure, distance, and direction on site map.</p>	<input checked="" type="checkbox"/>	
D. Are there any underground utilities (e.g., telephone, electricity, gas, water, sewer, storm drain) located within 100 feet of the UST system that could potentially come in contact with the contamination? [Electricity, sewer, storm drains] <p>If yes, indicate the type of utility, distance, and direction on the site map.</p>	<input checked="" type="checkbox"/>	
E. Has contaminated soil been identified at a depth of less than 3 feet below land surface in an area that is not capped by asphalt or concrete? <p>If yes, indicate the area of contaminated soil on the site map.</p>	<input checked="" type="checkbox"/> X*	

* Only soil from UST 28B's expanded excavation beneath the abandoned piping (approximately 8' x 7' x 3' deep) was identified as contaminated and sent to Detachment Charleston's bioremediation facility at Building 1601.

IX. SAMPLE INFORMATION, CONTINUATION

* = Depth Below the Surrounding Land Surface

X. SAMPLING METHODOLOGY

Provide a detailed description of the methods used to collect and store (preserve) the samples.

After the removal of USTs 28A and 28B soil and ground water samples were taken. Sampling was performed in accordance with SC DHEC R.61-92 Part 280 and SC DHEC UST Assessment Guidelines.

Sample jars were prepared by the testing laboratory. The grab method was utilized to fill the sample containers leaving as little head space as possible and immediately capped. Soil samples were extracted at the tank ends just above the ground water level. UST piping soil samples were taken under the piping at the mechanical connections. Groundwater samples were taken from the bottom center of the excavations. Biased composite samples were taken from the excavation dirt piles to characterize the soil for bioremediation or reuse.

The samples were marked, logged, and immediately placed in sample coolers packed with ice to maintain an approximate temperature of 4° C. Tools were thoroughly cleaned and decontaminated with organic-free soap and water after each sample.

The samples remained in the custody of SPORTENVDETCHASN until they were transferred to General Engineering Laboratories for analysis as documented in the attached Chain-of-Custody Record.

Attachment I

SITE MAP

You must supply a scaled site map. It should include all buildings, road names, utilities, tank and pump island locations, sample locations, extent of excavation, and any other pertinent information.

Site Maps:

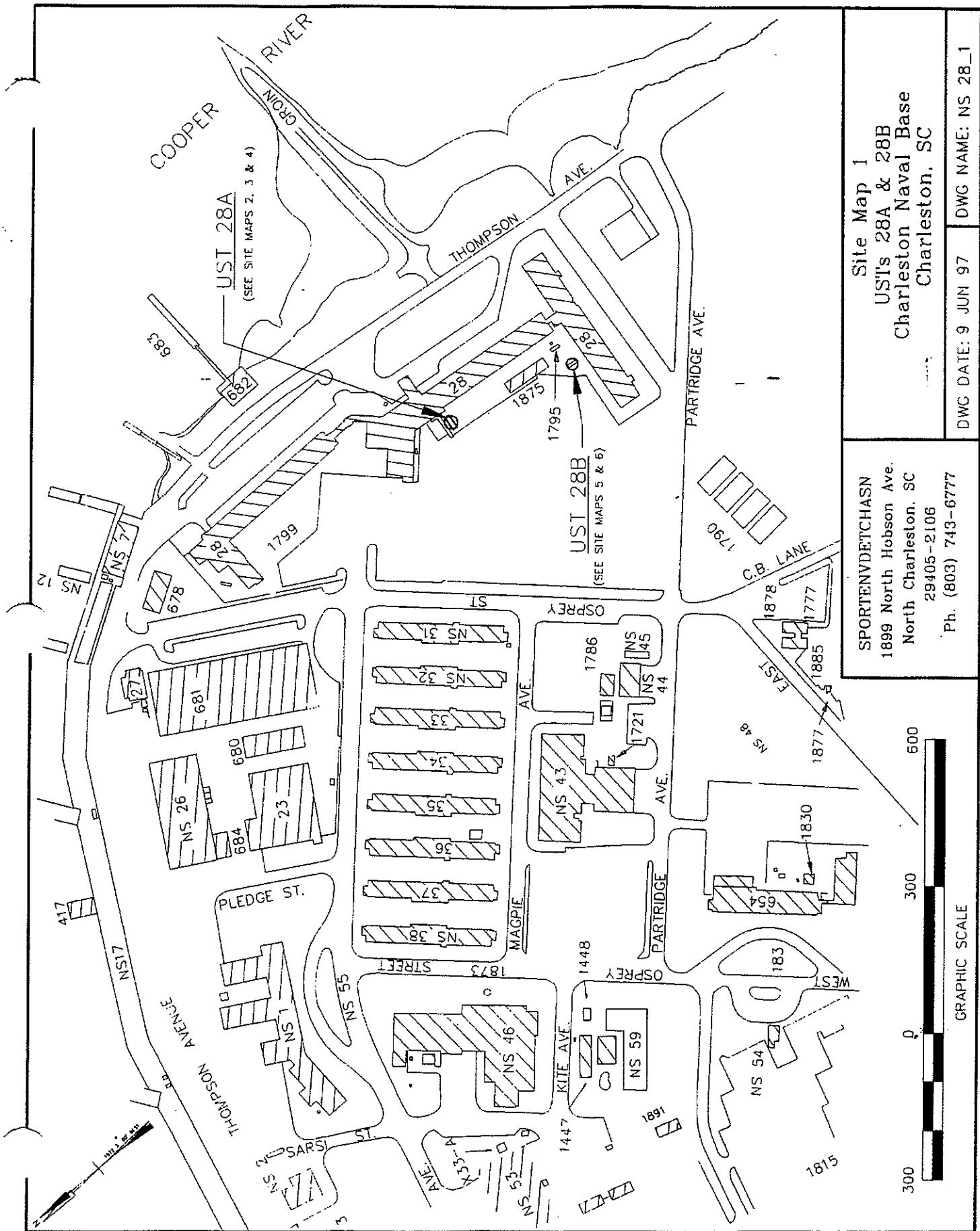
UST 28A: 1, 2, 3, and 4

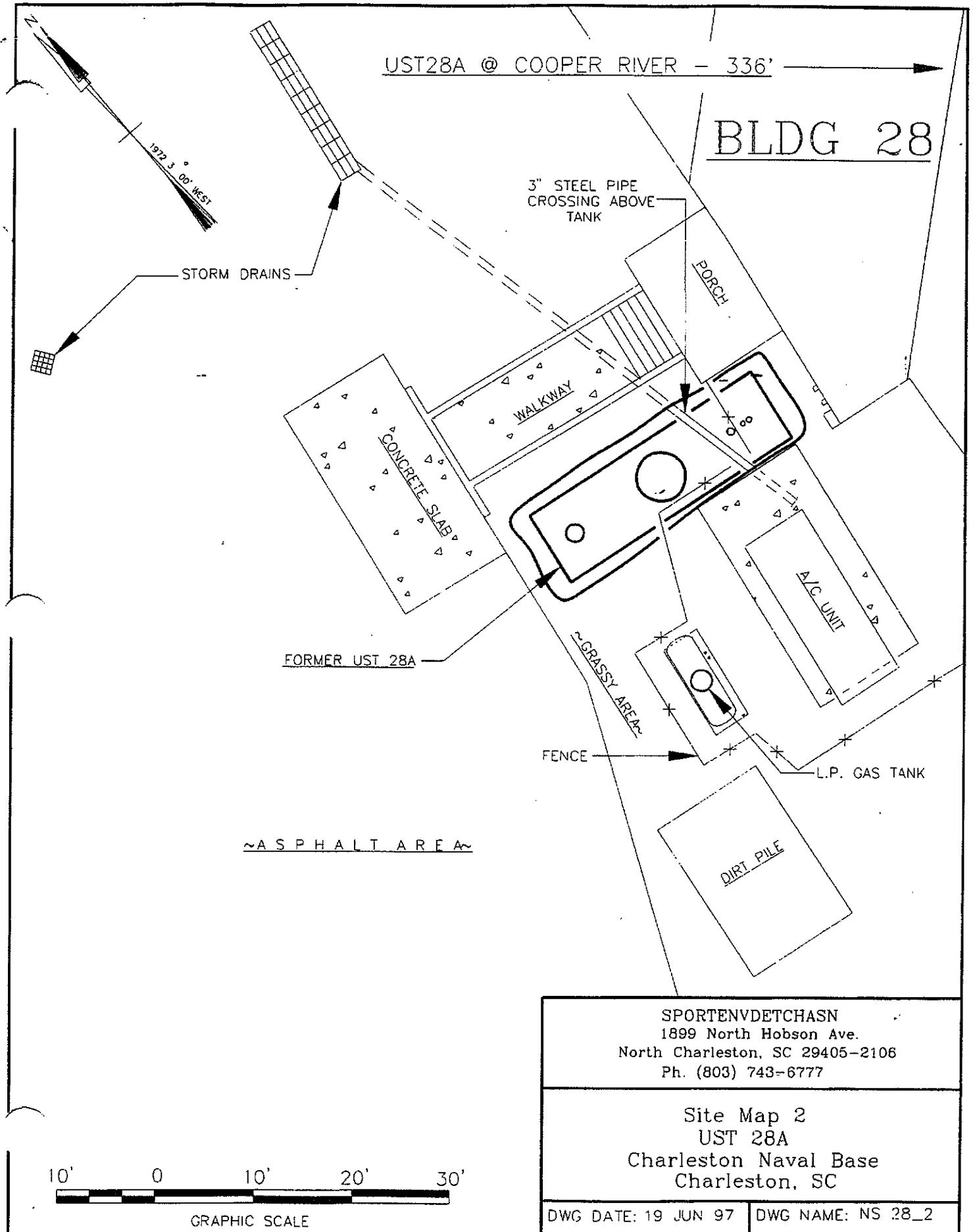
UST 28B: 1, 5, and 6

Photographs:

UST 28A: 1 and 2

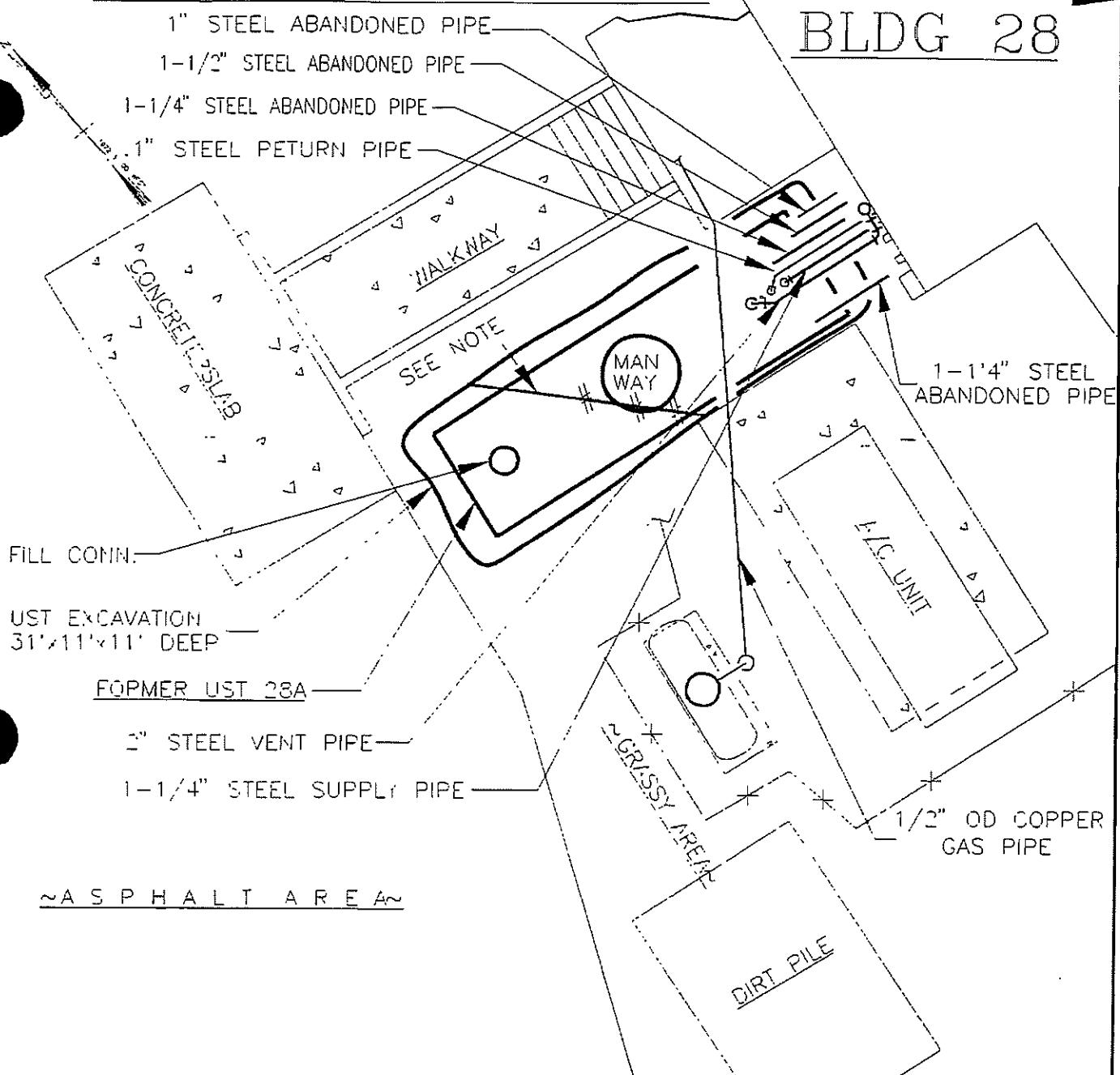
UST 28B: 3 and 4





UST28A @ COOPER RIVER - 336'

BLDG 28



10' 0 10' 20'
GRAPHIC SCALE

SPORTENVDETCHASN 1899 North Hobson Ave North Charleston, SC 29405-2106 Ph (803) 743-6777	
Site Map 3 UST 28A Charleston Naval Base Charleston, SC	
DWG DATE 10 JUL 97	DWG NAME NS 28_3

UST28A @ COOPER RIVER - 336'

BLDG 28

S S SPORT 0278-1,
DARK HARD CLAY,
STRONG ODOR, OVA=209.7 ppm

S S SPORT 0278-2,
DARK MUDDY CLAY,
NO ODOR, OVA=76 ppm

GW SPORT 0278-4

S.S. SPORT 0278-3,
DARK MUDDY CLAY,
NO ODOR, OVA=14.5 ppm

UST EXCAVATION,
31'x11'x11' DEEP

GROUNDWATER,
27'x7'x ~20" DEEP

A S P H A L T A R E A

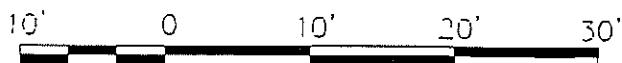
S S SPORT 0278-5,
DARK SANDY CLAY,
NO ODOR, OVA=1310 ppm
(COMPOSITE)

S.S. SPORT 0278-6,
DARK SANDY CLAY,
NO ODOR, OVA=1335 ppm
(COMPOSITE)

SPORTENVDETCHASN
1899 North Hobson Ave
North Charleston, SC 29405-2106
Ph (803) 743-6777

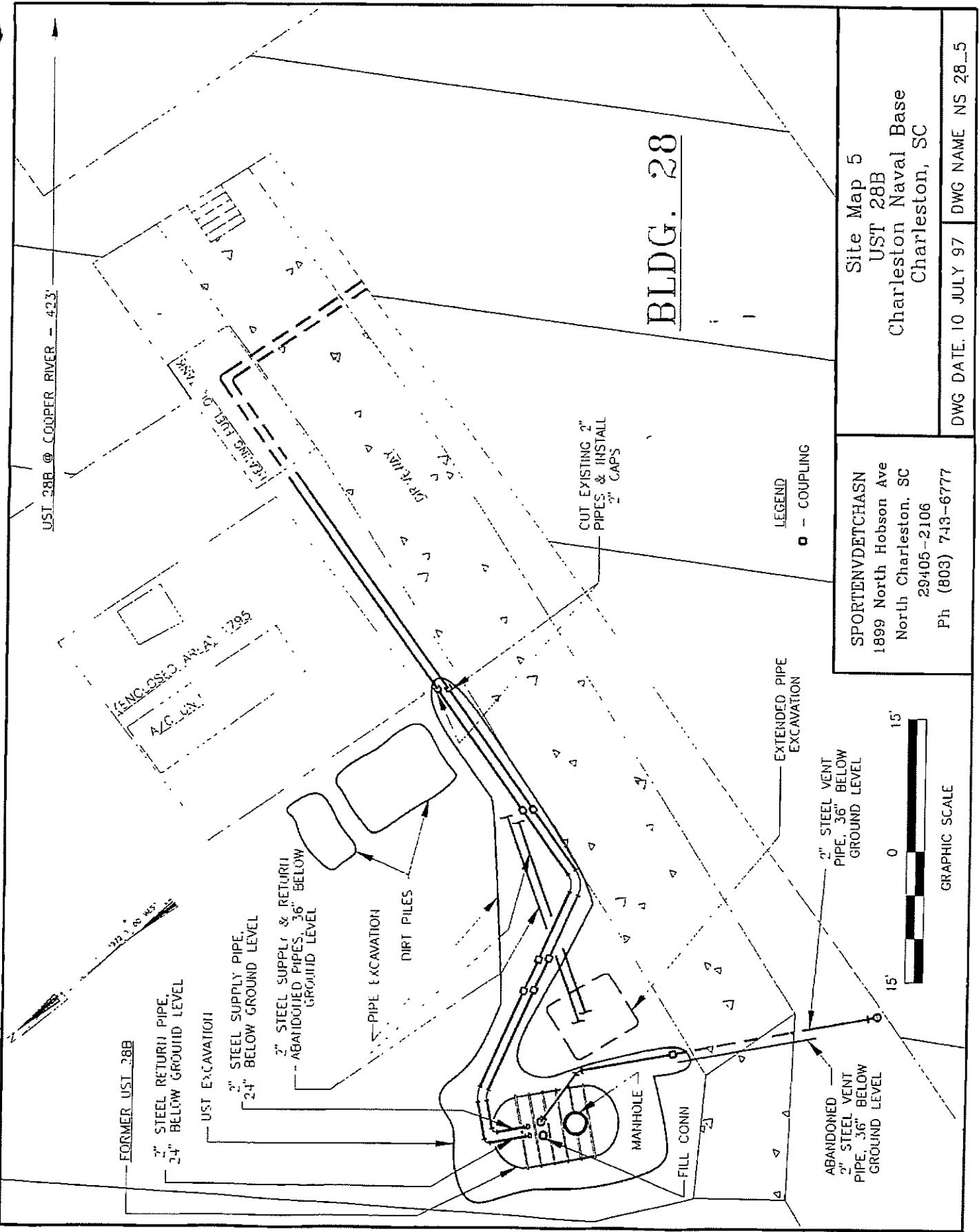
Site Map 4
UST 28A
Charleston Naval Base
Charleston, SC

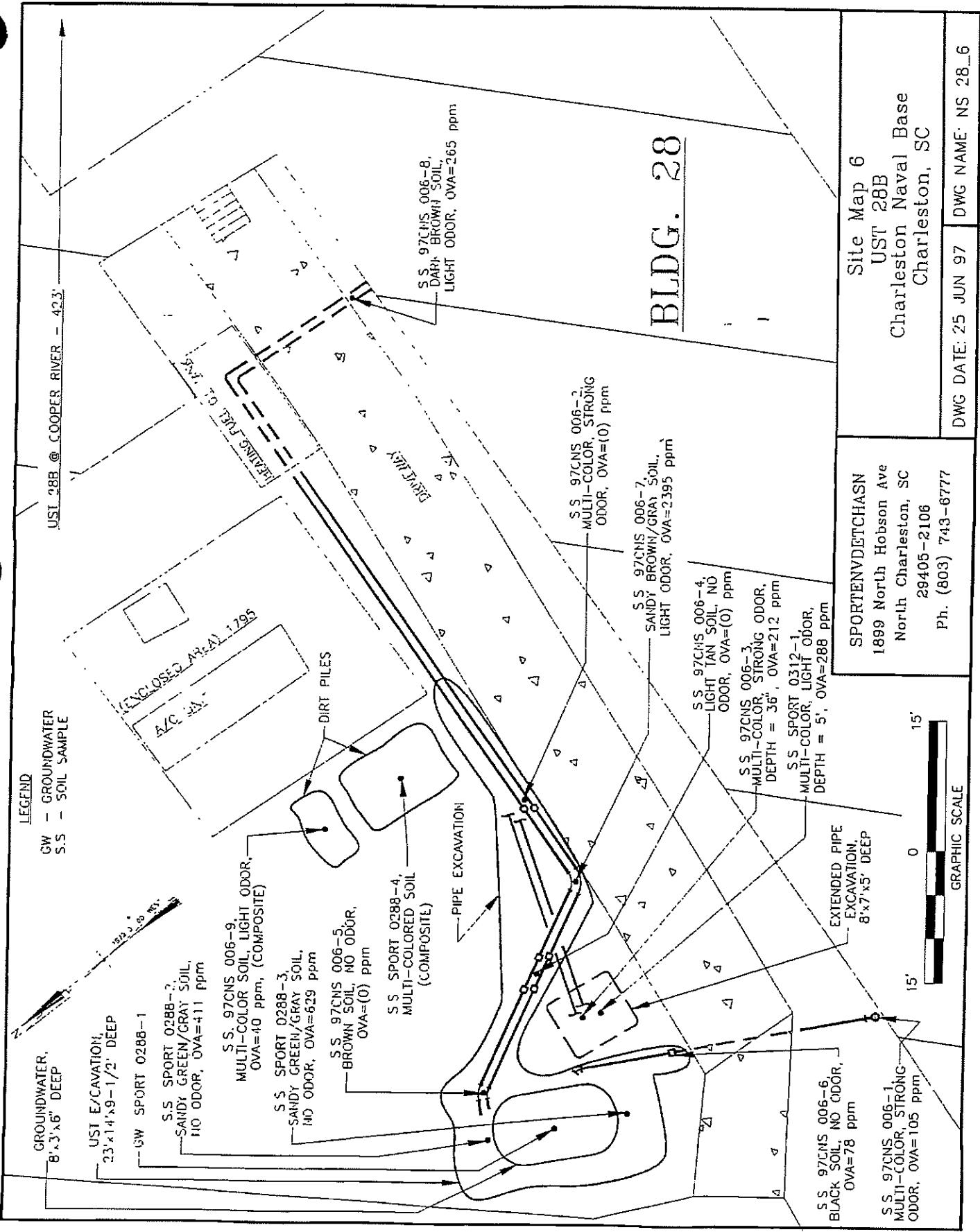
DWG DATE 19 JUN 97 DWG NAME: NS 28_4



GRAPHIC SCALE

LEGEND
GW - GROUNDWATER
SS - SOIL SAMPLE





UST NS28A



Photo 1: UST NS28B during removal from the excavation.



Photo 2: UST NS28A during removal from the excavation.

UST NS28B



Photo 3: UST NS28B being removed from the excavation.

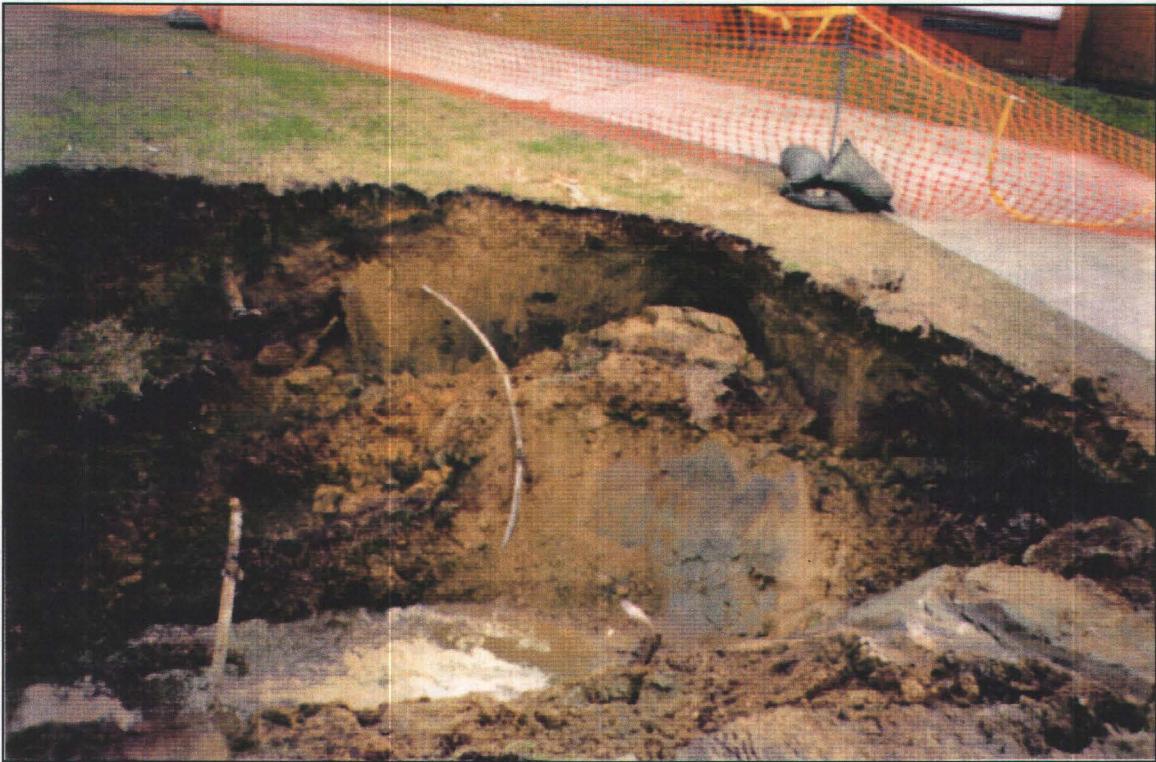


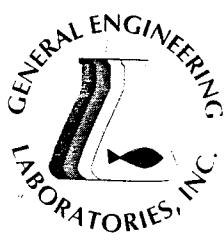
Photo 4: UST NS28B excavation after tank removal.

Attachment II

ANALYTICAL RESULTS

You must submit the laboratory report and chain-of-custody form for the samples. These samples must be analyzed by a South Carolina certified laboratory.

Certified Analytical Results
Chain-of-Custody



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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E8747
NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: January 02, 1997

Page 1 of 3

Sample ID : SPORT0278-1
Lab ID : 9612373-01
Matrix : Soil
Date Collected : 12/17/96
Date Received : 12/17/96
Priority : Routine
Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
<i>BTEX - 4 items</i>											
Benzene	U	0.00	5.00	10.0	ug/kg	5.0	JGS	12/20/96	1224	95312	1
Ethylbenzene		46.9	5.00	10.0	ug/kg	5.0					
Toluene		30.2	5.00	10.0	ug/kg	5.0					
Xylenes (TOTAL)		222	5.00	10.0	ug/kg	5.0					
Naphthalene		177	5.00	10.0	ug/kg	5.0					
Extractable Organics											
<i>Polynuclear Aromatic Hydrocarbons - 16 items</i>											
Acenaphthene	U	0.00	6480	13000	ug/kg	40.	RLC	12/26/96	1423	95229	2
Acenaphthylene	U	0.00	6480	13000	ug/kg	40.					
Anthracene	U	0.00	6480	13000	ug/kg	40.					
Benzo(a)anthracene	U	0.00	6480	13000	ug/kg	40.					
Benzo(a)pyrene	U	0.00	6480	13000	ug/kg	40.					
Benzo(b)fluoranthene	U	0.00	6480	13000	ug/kg	40.					
Benzo(ghi)perylene	U	0.00	6480	13000	ug/kg	40.					
Benzo(k)fluoranthene	U	0.00	6480	13000	ug/kg	40.					
Chrysene	U	0.00	6480	13000	ug/kg	40.					
Dibenz(a,h)anthracene	U	0.00	6480	13000	ug/kg	40.					
Fluoranthene	U	0.00	6480	13000	ug/kg	40.					
Fluorene	U	0.00	6480	13000	ug/kg	40.					
Indeno(1,2,3-c,d)pyrene	U	0.00	6480	13000	ug/kg	40.					
Naphthalene	U	0.00	6480	13000	ug/kg	40.					
Phenanthrene	U	0.00	6480	13000	ug/kg	40.					
Pyrene	U	0.00	6480	13000	ug/kg	40.					

The following prep procedures were performed:

GC/MS Base/Neutral Compounds

TNF 12/19/96 1630 95229 3

PO Box 30712 • Charleston, SC 29417 • 2040 Savage Road • 29407

(803) 556-8171 • Fax (803) 766-1178



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9612373-01



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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/8
NC	233	
SC	10120	10532
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: January 02, 1997

Page 2 of 3

Sample ID : SPORT0278-1

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
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Comments:

A dilution was required for Extractable Organics due to matrix interference. As a result, the detection limits are elevated.

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	0.00*	(30.0 - 115.)
Nitrobenzene-d5	M610	0.00*	(23.0 - 120.)
p-Terphenyl-d14	M610	0.00*	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	97.6	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	94.1	(63.4 - 136.)
Toluene-d8	BTEX-8260	106.	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	97.6	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	94.1	(63.4 - 136.)
Toluene-d8	NAP-8260	106.	(72.1 - 137.)

M = Method	Method-Description
M 1	EPA 8260
M 2	EPA 8270
M 3	EPA 3550

Notes:

The qualifiers in this report are defined as follows:

ND indicates that the analyte was not detected at a concentration greater than the detection limit.

J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).

U indicates that the analyte was not detected at a concentration greater than the detection limit.

* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

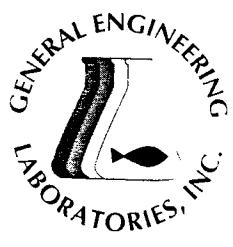
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cc: NPWC00196

Report Date: January 02, 1997

Page 3 of 3

Sample ID : SPORT0278-1

M = Method

Method-Description

This data report has been prepared and reviewed
in accordance with General Engineering Laboratories
standard operating procedures. Please direct
any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

Karen Blakeney
Reviewed By

PO Box 30712 • Charleston, SC 29417 • 2040 Savage Road • 29407

(803) 556-8171 • Fax (803) 766-1178

9612373-01

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Client: Supervisor of Ship Building & Conversion
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 1899 North Hobson Ave.
 North Charleston, South Carolina 29405-2106
 Contact: Mr. Bill Hiers
 Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: January 02, 1997

Page 1 of 3

Sample ID	:	SPORT0278-2
Lab ID	:	9612373-02
Matrix	:	Soil
Date Collected	:	12/17/96
Date Received	:	12/17/96
Priority	:	Routine
Collector	:	Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
<i>BTEX - 4 items</i>											
Benzene	U	0.00		1.00	ug/kg	1.0	JGS	12/20/96	2219	95312	1
Ethylbenzene	U	0.00		1.00	ug/kg	1.0	JGS	12/20/96	1254	95312	1
Toluene	U	0.00		1.00	ug/kg	1.0					
Xylenes (TOTAL)	U	0.00		1.00	ug/kg	1.0					
Naphthalene	U	0.700		1.00	ug/kg	1.0					
Extractable Organics											
<i>Polynuclear Aromatic Hydrocarbons - 16 items</i>											
Acenaphthene		3480		1660	ug/kg	10.	RLC	12/26/96	1455	95229	2
Acenaphthylene	U	0.00		1660	ug/kg	10.					
Anthracene		4930		1660	ug/kg	10.					
Benzo(a)anthracene		4240		1660	ug/kg	10.					
Benzo(a)pyrene	J	2020		1660	ug/kg	10.					
Benzo(b)fluoranthene	J	2910		1660	ug/kg	10.					
Benzo(ghi)perylene	U	0.00		1660	ug/kg	10.					
Benzo(k)fluoranthene	U	0.00		1660	ug/kg	10.					
Chrysene		5560		1660	ug/kg	10.					
Dibenzo(a,h)anthracene	U	0.00		1660	ug/kg	10.					
Fluoranthene		13600		1660	ug/kg	10.					
Fluorene	U	0.00		1660	ug/kg	10.					
Indeno(1,2,3-c,d)pyrene	U	0.00		1660	ug/kg	10.					
Naphthalene	U	0.00		1660	ug/kg	10.					
Phenanthrene		8940		1660	ug/kg	10.					
Pyrene		10000		1660	ug/kg	10.					

The following prep procedures were performed:

GC/MS Base/Neutral Compounds

TNF 12/19/96 1630 95229 3

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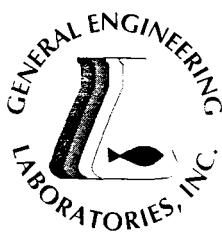
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SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: January 02, 1997

Page 2 of 3

Sample ID : SPORT0278-2

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
-----------	-----------	--------	----	----	-------	----	---------	------	------	-------	---

Comments:

A dilution was required for Extractable Organics due to matrix interference. As a result, the detection limits are elevated.

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	104.	(30.0 - 115.)
Nitrobenzene-d5	M610	0.00*	(23.0 - 120.)
p-Terphenyl-d14	M610	120.	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	97.9	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	121.	(63.4 - 136.)
Toluene-d8	BTEX-8260	101.	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	97.9	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	121.	(63.4 - 136.)
Toluene-d8	NAP-8260	101.	(72.1 - 137.)

M = Method	Method-Description
M 1	EPA 8260
M 2	EPA 8270
M 3	EPA 3550

Notes:

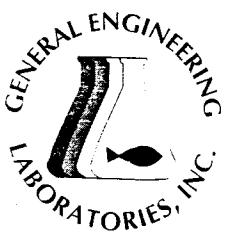
The qualifiers in this report are defined as follows:

ND indicates that the analyte was not detected at a concentration greater than the detection limit.

J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).

U indicates that the analyte was not detected at a concentration greater than the detection limit.

* indicates that a quality control analyte recovery is outside of specified acceptance criteria.



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SC	10120	10582
TN	02934	02934

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1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: January 02, 1997

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Sample ID : SPORT0278-2

M = Method

Method-Description

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standard operating procedures. Please direct
any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

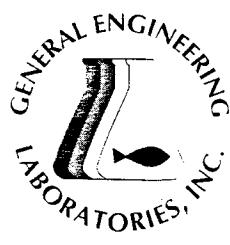
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NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
 SUPSHIP-Portsmouth Detachment-Env.
 1899 North Hobson Ave.
 North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: January 02, 1997

Page 1 of 2

Sample ID	:	SPORT0278-3
Lab ID	:	9612373-03
Matrix	:	Soil
Date Collected	:	12/17/96
Date Received	:	12/17/96
Priority	:	Routine
Collector	:	Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
<i>BTEX - 4 items</i>											
Benzene	U	0.00	1.00	2.00	ug/kg	1.0	JGS	12/20/96	1325	95312	1
Ethylbenzene	U	0.00	1.00	2.00	ug/kg	1.0					
Toluene	U	0.00	1.00	2.00	ug/kg	1.0					
Xylenes (TOTAL)	U	0.00	1.00	4.00	ug/kg	1.0					
Naphthalene	U	0.00	1.00	2.00	ug/kg	1.0					
Extractable Organics											
<i>Polynuclear Aromatic Hydrocarbons - 16 items</i>											
Acenaphthene		866	162	330	ug/kg	1.0	RLC	12/26/96	1528	95229	2
Acenaphthylene	U	0.00	162	330	ug/kg	1.0					
Anthracene		478	162	330	ug/kg	1.0					
Benzo(a)anthracene		355	162	330	ug/kg	1.0					
Benzo(a)pyrene	J	187	162	330	ug/kg	1.0					
Benzo(b)fluoranthene	J	310	162	330	ug/kg	1.0					
Benzo(ghi)perylene	U	0.00	162	330	ug/kg	1.0					
Benzo(k)fluoranthene	U	0.00	162	330	ug/kg	1.0					
Chrysene		426	162	330	ug/kg	1.0					
Dibenzo(a,h)anthracene	U	0.00	162	330	ug/kg	1.0					
Fluoranthene		1260	162	330	ug/kg	1.0					
Fluorene	U	0.00	162	330	ug/kg	1.0					
Indeno(1,2,3-c,d)pyrene	U	0.00	162	330	ug/kg	1.0					
Naphthalene	U	0.00	162	330	ug/kg	1.0					
Phenanthrene		520	162	330	ug/kg	1.0					
Pyrene		969	162	330	ug/kg	1.0					

The following prep procedures were performed:
 GC/MS Base/Neutral Compounds

TNF 12/19/96 1630 95229 3

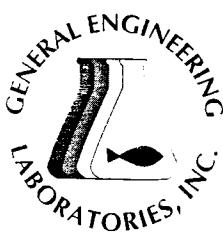
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NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
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1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: January 02, 1997

Page 2 of 2

Sample ID : SPORT0278-3			
Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	76.8	(30.0 - 115.)
Nitrobenzene-d5	M610	79.6	(23.0 - 120.)
p-Terphenyl-d14	M610	89.5	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	101.	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	94.4	(63.4 - 136.)
Toluene-d8	BTEX-8260	109.	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	101.	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	94.4	(63.4 - 136.)
Toluene-d8	NAP-8260	109.	(72.1 - 137.)

M = Method	Method-Description
M 1	EPA 8260
M 2	EPA 8270
M 3	EPA 3550

Notes:

The qualifiers in this report are defined as follows:

ND indicates that the analyte was not detected at a concentration greater than the detection limit.

J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).

U indicates that the analyte was not detected at a concentration greater than the detection limit.

* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

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any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

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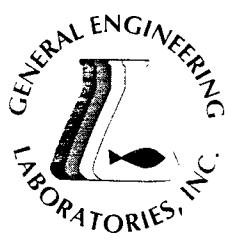
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 Contact: Mr. Bill Hiers
 Project Description: SUPSHIP-Portsmouth Detachment

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Report Date: January 02, 1997

Page 1 of 3

Sample ID	:	SPORT0278-4
Lab ID	:	9612373-04
Matrix	:	GroundH2O
Date Collected	:	12/17/96
Date Received	:	12/17/96
Priority	:	Routine
Collector	:	Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
<i>BTEX - 4 items</i>											
Benzene	U	0.00	1.00	2.00	ug/l	1.0	JAC	12/30/96	1513	95615	1
Ethylbenzene	U	0.00	1.00	2.00	ug/l	1.0					
Toluene	U	0.220	1.00	2.00	ug/l	1.0					
Xylenes (TOTAL)	U	0.500	1.00	4.00	ug/l	1.0					
Methyl Tert Butyl Ether	U	0.00	1.00	2.00	ug/l	1.0					
Naphthalene	U	0.00	1.00	2.00	ug/l	1.0					
Extractable Organics											
<i>Polynuclear Aromatic Hydrocarbons - 16 items</i>											
Acenaphthene		48.9	5.20	10.4	ug/l	1.0	BDG	12/20/96	2126	95282	2
Acenaphthylene	U	0.00	5.20	10.4	ug/l	1.0					
Anthracene		40.4	5.20	10.4	ug/l	1.0					
Benzo(a)anthracene		18.0	5.20	10.4	ug/l	1.0					
Benzo(a)pyrene	J	7.59	5.20	10.4	ug/l	1.0					
Benzo(b)fluoranthene	U	0.00	5.20	10.4	ug/l	1.0					
Benzo(ghi)perylene	U	0.00	5.20	10.4	ug/l	1.0					
Benzo(k)fluoranthene		21.7	5.20	10.4	ug/l	1.0					
Chrysene		22.5	5.20	10.4	ug/l	1.0					
Dibeno(a,h)anthracene	U	0.00	5.20	10.4	ug/l	1.0					
Fluoranthene		57.3	5.20	10.4	ug/l	1.0					
Fluorene		13.6	5.20	10.4	ug/l	1.0					
Indeno(1,2,3-c,d)pyrene	U	0.00	5.20	10.4	ug/l	1.0					
Naphthalene	J	6.24	5.20	10.4	ug/l	1.0					
Phenanthrene		79.2	5.20	10.4	ug/l	1.0					
Pyrene		53.5	5.20	10.4	ug/l	1.0					

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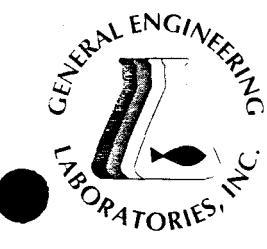


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TN	02934	02934

Client: Supervisor of Ship Building & Conversion
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1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: January 02, 1997

Page 2 of 3

Sample ID		: SPORT0278-4							
Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst Date	Time	Batch M

The following prep procedures were performed:

GC/MS Base/Neutral Compounds

HDB 12/19/96 1000 95282 3

Surrogate Recovery	Test	Percent %	Acceptable Limits
2-Fluorobiphenyl	M610	93.8	(43.0 - 108.)
Nitrobenzene-d5	M610	80.8	(35.0 - 111.)
p-Terphenyl-d14	M610	89.6	(33.0 - 125.)
Bromofluorobenzene	BTEX-8260	97.6	(73.8 - 128.)
Dibromofluoromethane	BTEX-8260	104.	(63.9 - 139.)
Toluene-d8	BTEX-8260	103.	(77.1 - 121.)
Bromofluorobenzene	MTBE-8260	97.6	(73.8 - 128.)
Dibromofluoromethane	MTBE-8260	104.	(63.9 - 139.)
Toluene-d8	MTBE-8260	103.	(77.1 - 121.)
Bromofluorobenzene	NAP-8260	97.6	(73.8 - 128.)
Dibromofluoromethane	NAP-8260	104.	(63.9 - 139.)
Toluene-d8	NAP-8260	103.	(77.1 - 121.)

M = Method	Method-Description
M 1	EPA 8260
M 2	EPA 8270
M 3	EPA 3510

Notes:

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ND indicates that the analyte was not detected at a concentration greater than the detection limit.

J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).

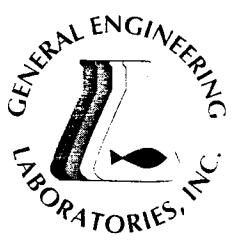
U indicates that the analyte was not detected at a concentration greater than the detection limit.

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SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
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Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

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Report Date: January 02, 1997

Page 3 of 3

Sample ID : SPORT0278-4

M = Method

Method-Description

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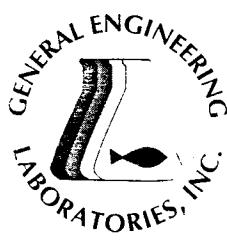
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Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: January 03, 1997

Page 1 of 2

Sample ID	:	SPORT0278-5
Lab ID	:	9612373-05
Matrix	:	Soil
Date Collected	:	12/17/96
Date Received	:	12/17/96
Priority	:	Routine
Collector	:	Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
<i>BTEX - 4 items</i>											
Benzene	U	0.00		1.00	ug/kg	1.0	MKP	12/31/96	1457	95377	1
Ethylbenzene	U	0.00		1.00	ug/kg	1.0					
Toluene	U	0.00		1.00	ug/kg	1.0					
Xylenes (TOTAL)	U	0.00		1.00	ug/kg	1.0					
Naphthalene	U	0.00		1.00	ug/kg	1.0					
Extractable Organics											
<i>Polynuclear Aromatic Hydrocarbons - 16 items</i>											
Acenaphthene	U	0.00		166	ug/kg	1.0	RLC	12/26/96	1601	95229	2
Acenaphthylene	U	0.00		166	ug/kg	1.0					
Anthracene	U	0.00		166	ug/kg	1.0					
Benzo(a)anthracene	J	173		166	ug/kg	1.0					
Benzo(a)pyrene	J	212		166	ug/kg	1.0					
Benzo(b)fluoranthene		335		166	ug/kg	1.0					
Benzo(ghi)perylene	J	176		166	ug/kg	1.0					
Benzo(k)fluoranthene	U	0.00		166	ug/kg	1.0					
Chrysene	J	183		166	ug/kg	1.0					
Dibenzo(a,h)anthracene	U	0.00		166	ug/kg	1.0					
Fluoranthene	J	193		166	ug/kg	1.0					
Fluorene	U	0.00		166	ug/kg	1.0					
Indeno(1,2,3-c,d)pyrene	J	193		166	ug/kg	1.0					
Naphthalene	U	0.00		166	ug/kg	1.0					
Phenanthrene	U	0.00		166	ug/kg	1.0					
Pyrene	J	203		166	ug/kg	1.0					

The following prep procedures were performed:

GC/MS Base/Neutral Compounds

TNF 12/19/96 1630 95229 3

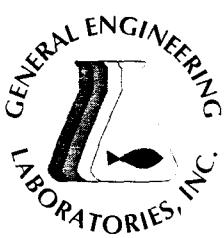
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NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: January 03, 1997

Page 2 of 2

Sample ID : SPORT0278-5			
Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	76.1	(30.0 - 115.)
Nitrobenzene-d5	M610	82.5	(23.0 - 120.)
p-Terphenyl-d14	M610	75.9	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	117.	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	115.	(63.4 - 136.)
Toluene-d8	BTEX-8260	113.	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	117.	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	115.	(63.4 - 136.)
Toluene-d8	NAP-8260	113.	(72.1 - 137.)

M = Method	Method-Description
M 1	EPA 8260
M 2	EPA 8270
M 3	EPA 3550

Notes:

The qualifiers in this report are defined as follows:

ND indicates that the analyte was not detected at a concentration greater than the detection limit.

J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).

U indicates that the analyte was not detected at a concentration greater than the detection limit.

* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed
in accordance with General Engineering Laboratories
standard operating procedures. Please direct
any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

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NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
 SUPSHIP-Portsmouth Detachment-Env.
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 Contact: North Charleston, South Carolina 29405-2106
 Mr. Bill Hiers
 Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: January 03, 1997

Page 1 of 2

Sample ID	:	SPORT0278-6
Lab ID	:	9612373-06
Matrix	:	Soil
Date Collected	:	12/17/96
Date Received	:	12/17/96
Priority	:	Routine
Collector	:	Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
<i>BTEX - 4 items</i>											
Benzene	U	0.00	1.00	2.00	ug/kg	1.0	MKP	12/31/96	2025	95377	1
Ethylbenzene	U	0.00	1.00	2.00	ug/kg	1.0					
Toluene	U	0.00	1.00	2.00	ug/kg	1.0					
Xylenes (TOTAL)	U	0.00	1.00	4.00	ug/kg	1.0					
Naphthalene	J	1.57	1.00	2.00	ug/kg	1.0					
Extractable Organics											
<i>Polynuclear Aromatic Hydrocarbons - 16 items</i>											
Acenaphthene		488	163	330	ug/kg	1.0	RLC	12/26/96	1633	95229	2
Acenaphthylene	U	0.00	163	330	ug/kg	1.0					
Anthracene		354	163	330	ug/kg	1.0					
Benzo(a)anthracene		332	163	330	ug/kg	1.0					
Benzo(a)pyrene	J	205	163	330	ug/kg	1.0					
Benzo(b)fluoranthene		390	163	330	ug/kg	1.0					
Benzo(ghi)perylene	U	0.00	163	330	ug/kg	1.0					
Benzo(k)fluoranthene	U	0.00	163	330	ug/kg	1.0					
Chrysene		442	163	330	ug/kg	1.0					
Dibenzo(a,h)anthracene	U	0.00	163	330	ug/kg	1.0					
Fluoranthene		1170	163	330	ug/kg	1.0					
Fluorene	U	0.00	163	330	ug/kg	1.0					
Indeno(1,2,3-c,d)pyrene	U	0.00	163	330	ug/kg	1.0					
Naphthalene	U	0.00	163	330	ug/kg	1.0					
Phenanthrene		1000	163	330	ug/kg	1.0					
Pyrene		1100	163	330	ug/kg	1.0					

The following prep procedures were performed:
 GC/MS Base/Neutral Compounds

TNF 12/19/96 1630 95229 3

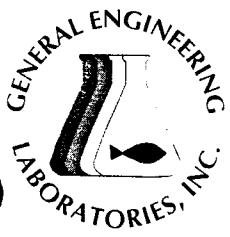
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SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: January 03, 1997

Page 2 of 2

Sample ID : SPORT0278-6			
Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	82.3	(30.0 - 115.)
Nitrobenzene-d5	M610	83.9	(23.0 - 120.)
p-Terphenyl-d14	M610	91.2	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	121.	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	111.	(63.4 - 136.)
Toluene-d8	BTEX-8260	111.	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	121.	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	111.	(63.4 - 136.)
Toluene-d8	NAP-8260	111.	(72.1 - 137.)

M = Method	Method-Description
M 1	EPA 8260
M 2	EPA 8270
M 3	EPA 3550

Notes:

The qualifiers in this report are defined as follows:

ND indicates that the analyte was not detected at a concentration greater than the detection limit.

J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).

U indicates that the analyte was not detected at a concentration greater than the detection limit.

* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

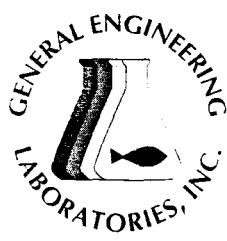
This data report has been prepared and reviewed
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standard operating procedures. Please direct
any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

Karen Blakeney
Reviewed By

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FL	E87156/87294	E8747:
NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
 SUPSHIP-Portsmouth Detachment-Env.
 1899 North Hobson Ave.
 North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: January 02, 1997

Page 1 of 2

Sample ID	:	SPORT0278-7
Lab ID	:	9612373-07
Matrix	:	GroundH2O
Date Collected	:	12/17/96
Date Received	:	12/17/96
Priority	:	Routine
Collector	:	Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
<i>BTEX - 4 items</i>											
Benzene	U	0.00		1.00	ug/l	1.0	JAC	12/30/96	1543	95615	
Ethylbenzene	U	0.00		1.00	ug/l	1.0					
Toluene	U	0.00		1.00	ug/l	1.0					
Xylenes (TOTAL)	U	0.00		1.00	ug/l	1.0					
Methyl Tert Butyl Ether	U	0.00		1.00	ug/l	1.0					
Naphthalene	U	0.00		1.00	ug/l	1.0					

Surrogate Recovery	Test	Percent%	Acceptable Limits
Bromofluorobenzene	BTEX-8260	98.8	(73.8 - 128.)
Dibromofluoromethane	BTEX-8260	108.	(63.9 - 139.)
Toluene-d8	BTEX-8260	103.	(77.1 - 121.)
Bromofluorobenzene	MTBE-8260	98.8	(73.8 - 128.)
Dibromofluoromethane	MTBE-8260	108.	(63.9 - 139.)
Toluene-d8	MTBE-8260	103.	(77.1 - 121.)
Bromofluorobenzene	NAP-8260	98.8	(73.8 - 128.)
Dibromofluoromethane	NAP-8260	108.	(63.9 - 139.)
Toluene-d8	NAP-8260	103.	(77.1 - 121.)

M = Method

Method-Description

M 1

EPA 8260

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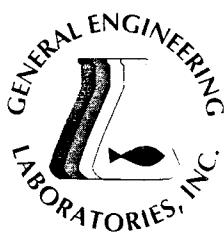


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NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: January 02, 1997

Page 2 of 2

Sample ID : SPORT0278-7

M = Method

Method-Description

Notes:

The qualifiers in this report are defined as follows:

ND indicates that the analyte was not detected at a concentration greater than the detection limit.

J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).

U indicates that the analyte was not detected at a concentration greater than the detection limit.

* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed
in accordance with General Engineering Laboratories
standard operating procedures. Please direct
any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

Karen Blakeney
Reviewed By

NPWC 00196

CHAIN OF CUSTODY RECORD

Page 1 of 1

96/2373 KBB

General Engineering Laboratories, Inc.
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 Charleston, South Carolina 29414
 P.O. Box 30712
 Charleston, South Carolina 29417
 (803) 556-8171

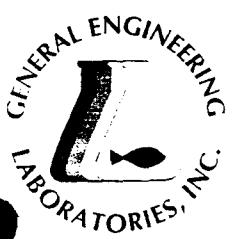
SAMPLE ID	DATE	TIME	WELL SOIL	COMP GRAB	# OF CONTAINERS	SAMPLE ANALYSIS REQUIRED (X) - use remarks area to specify specific compounds or methods										Remarks	
						PH conductivity	TOC/DOC	TOX	Chloride, Fluoride, Sulfide	Nitrite/Nitrate	VOC - Specify Method required	METALS - specify	Pesticide	Herbicide	Total Phenol	Acid Extractables	B/N Extractables
-01	SPORT0278-1	12/17/96	0910 0932	X	X 2											X X	UST NS-28(A)-1 soil
-02	SPORT0278-2	12/17/96	1130	X X	2											+ +	UST NS-28(A)-2 soil
-03	SPORT0278-3	12/17/96	1147	X X	2											X X	UST NS-28(A)-3 soil
-04	SPORT0278-4	12/17/96	1207	X X	5											1 X	UST NS-28(A)-4 G-W
-05	SPORT0278-5	12/17/96	1310	XX	2											XX X	UST NS-28(A)-5 DIRT pile
-06	SPORT0278-6	12/17/96	1335	XX	2											XX X	UST NS-28(A)-6 DIRT pile
-07	SPORT0278-7	12/17/96	0800	X	3											1	UST NS-28(A) VOA TRIP ISLAND
																I. BTEX/WAPTH/MTBE	

Relinquished by: <i>Michael Potts</i>	Date: 12/17/96	Time: 1430	Received by: <i>Todd McLean</i>	Relinquished by: <i>Jed J. Weber, Jr.</i>	Date: 12/17/96	Time: 1430	Received by: <i>Michael Potts</i>
Relinquished by: <i>Michael Potts</i>	Date: 12/17/96	Time: 1512	Received by lab by: <i>Donne French</i>	Date: 12/17/96	Time:	Remarks:	

White = sample collector

Yellow = file

Pink = with report



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SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
 SUPSHIP-Portsmouth Detachment-Env.
 1899 North Hobson Ave.
 North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: January 20, 1997

Page 1 of 3

Sample ID	:	SPORT0288-1
Lab ID	:	9701143-01
Matrix	:	GroundH2O
Date Collected	:	01/08/97
Date Received	:	01/09/97
Priority	:	Routine
Collector	:	Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
<i>BTEX - 4 items</i>											
Benzene	U	0.00	1.00	2.00	ug/l	1.0	JGS	01/14/97	1249	96232	1
Ethylbenzene	U	0.00	1.00	2.00	ug/l	1.0					
Toluene	U	0.00	1.00	2.00	ug/l	1.0					
Xylenes (TOTAL)	U	0.00	1.00	4.00	ug/l	1.0					
Methyl Tert Butyl Ether	U	0.00	1.00	2.00	ug/l	1.0					
Naphthalene	U	0.00	1.00	2.00	ug/l	1.0					
Extractable Organics											
<i>Polynuclear Aromatic Hydrocarbons - 16 items</i>											
Acenaphthene	U	0.00	5.00	10.0	ug/l	1.0	BDG	01/14/97	1924	96160	2
Acenaphthylene	U	0.00	5.00	10.0	ug/l	1.0					
Anthracene	U	0.00	5.00	10.0	ug/l	1.0					
Benzo(a)anthracene	U	0.00	5.00	10.0	ug/l	1.0					
Benzo(a)pyrene	U	0.00	5.00	10.0	ug/l	1.0					
Benzo(b)fluoranthene	U	0.00	5.00	10.0	ug/l	1.0					
Benzo(ghi)perylene	U	0.00	5.00	10.0	ug/l	1.0					
Benzo(k)fluoranthene	U	0.00	5.00	10.0	ug/l	1.0					
Chrysene	U	0.00	5.00	10.0	ug/l	1.0					
Dibenzo(a,h)anthracene	U	0.00	5.00	10.0	ug/l	1.0					
Fluoranthene	U	0.00	5.00	10.0	ug/l	1.0					
Fluorene	U	0.00	5.00	10.0	ug/l	1.0					
Indeno(1,2,3-c,d)pyrene	U	0.00	5.00	10.0	ug/l	1.0					
Naphthalene	U	0.00	5.00	10.0	ug/l	1.0					
Phenanthrene	U	0.00	5.00	10.0	ug/l	1.0					
Pyrene	U	0.00	5.00	10.0	ug/l	1.0					

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9701143-01



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SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
 SUPSHIP-Portsmouth Detachment-Env.
 1899 North Hobson Ave.
 North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: January 20, 1997

Page 2 of 3

Sample ID : SPORT0288-1

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
-----------	-----------	--------	----	----	-------	----	---------	------	------	-------	---

The following prep procedures were performed:

GC/MS Base/Neutral Compounds

HDB 01/13/97 1300 96160 3

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	88.4	(43.0 - 108.)
Nitrobenzene-d5	M610	82.4	(35.0 - 111.)
p-Terphenyl-d14	M610	90.6	(33.0 - 125.)
Bromofluorobenzene	BTEX-8260	116.	(73.8 - 128.)
Dibromofluoromethane	BTEX-8260	116.	(63.9 - 139.)
Toluene-d8	BTEX-8260	112.	(77.1 - 121.)
Bromofluorobenzene	MTBE-8260	116.	(73.8 - 128.)
Dibromofluoromethane	MTBE-8260	116.	(63.9 - 139.)
Toluene-d8	MTBE-8260	112.	(77.1 - 121.)
Bromofluorobenzene	NAP-8260	116.	(73.8 - 128.)
Dibromofluoromethane	NAP-8260	116.	(63.9 - 139.)
Toluene-d8	NAP-8260	112.	(77.1 - 121.)

M = Method	Method-Description
M 1	EPA 8260
M 2	EPA 8270
M 3	EPA 3510

Notes:

The qualifiers in this report are defined as follows:

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J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).

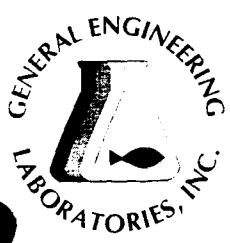
U indicates that the analyte was not detected at a concentration greater than the detection limit.

* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

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SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: January 20, 1997

Page 3 of 3

Sample ID : SPORT0288-1

M = Method **Method-Description**

This data report has been prepared and reviewed
in accordance with General Engineering Laboratories
standard operating procedures. Please direct
any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

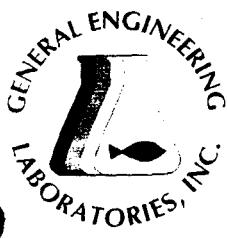
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SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
 SUPSHIP-Portsmouth Detachment-Env.
 1899 North Hobson Ave.
 North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: January 20, 1997

Page 1 of 2

Sample ID	:	SPORT0288-2
Lab ID	:	9701143-02
Matrix	:	Soil
Date Collected	:	01/08/97
Date Received	:	01/09/97
Priority	:	Routine
Collector	:	Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
<i>BTEX - 4 items</i>											
Benzene	U	0.00	1.00	2.00	ug/kg	1.0	RMB	01/10/97	1646	96085	1
Ethylbenzene	U	0.00	1.00	2.00	ug/kg	1.0					
Toluene	U	0.00	1.00	2.00	ug/kg	1.0					
Xylenes (TOTAL)	U	0.00	1.00	4.00	ug/kg	1.0					
Naphthalene	U	0.00	1.00	2.00	ug/kg	1.0					
Extractable Organics											
<i>Polynuclear Aromatic Hydrocarbons - 16 items</i>											
Acenaphthene	U	0.00	166	332	ug/kg	1.0	JCB	01/14/97	1803	96115	2
Acenaphthylene	U	0.00	166	332	ug/kg	1.0					
Anthracene	U	0.00	166	332	ug/kg	1.0					
Benzo(a)anthracene	U	0.00	166	332	ug/kg	1.0					
Benzo(a)pyrene	U	0.00	166	332	ug/kg	1.0					
Benzo(b)fluoranthene	U	0.00	166	332	ug/kg	1.0					
Benzo(ghi)perylene	U	0.00	166	332	ug/kg	1.0					
Benzo(k)fluoranthene	U	0.00	166	332	ug/kg	1.0					
Chrysene	U	0.00	166	332	ug/kg	1.0					
Dibenzo(a,h)anthracene	U	0.00	166	332	ug/kg	1.0					
Fluoranthene	U	0.00	166	332	ug/kg	1.0					
Fluorene	U	0.00	166	332	ug/kg	1.0					
Indeno(1,2,3-c,d)pyrene	U	0.00	166	332	ug/kg	1.0					
Naphthalene	U	0.00	166	332	ug/kg	1.0					
Phenanthrene	U	0.00	166	332	ug/kg	1.0					
Pyrene	U	0.00	166	332	ug/kg	1.0					

The following prep procedures were performed:

C/MS Base/Neutral Compounds

MS 01/13/97 1600 96115 3

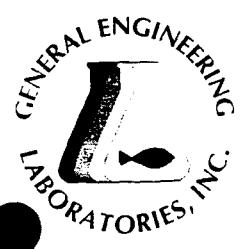
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SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: January 20, 1997

Page 2 of 2

Sample ID : SPORT0288-2

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	79.1	(30.0 - 115.)
Nitrobenzene-d5	M610	65.0	(23.0 - 120.)
p-Terphenyl-d14	M610	77.1	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	108.	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	98.0	(63.4 - 136.)
Toluene-d8	BTEX-8260	96.0	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	108.	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	98.0	(63.4 - 136.)
Toluene-d8	NAP-8260	96.0	(72.1 - 137.)

M = Method Method-Description

M 1	EPA 8260
M 2	EPA 8270
M 3	EPA 3550

Notes:

The qualifiers in this report are defined as follows:

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J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).

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* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

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standard operating procedures. Please direct
any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

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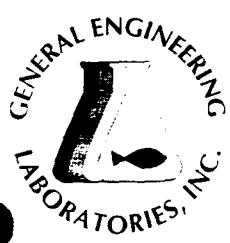
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SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
 SUPSHIP-Portsmouth Detachment-Env.
 1899 North Hobson Ave.
 North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: January 20, 1997

Page 1 of 2

Sample ID	:	SPORT0288-3
Lab ID	:	9701143-03
Matrix	:	Soil
Date Collected	:	01/08/97
Date Received	:	01/09/97
Priority	:	Routine
Collector	:	Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
<i>BTEX - 4 items</i>											
Benzene	U	0.00	1.00	2.00	ug/kg	1.0	RMB	01/10/97	1716	96085	1
Ethylbenzene	U	0.00	1.00	2.00	ug/kg	1.0					
Toluene	U	0.00	1.00	2.00	ug/kg	1.0					
Xylenes (TOTAL)	U	0.00	1.00	4.00	ug/kg	1.0					
Naphthalene	U	0.00	1.00	2.00	ug/kg	1.0					
Extractable Organics											
<i>Polynuclear Aromatic Hydrocarbons - 16 items</i>											
Acenaphthene	U	0.00	162	330	ug/kg	1.0	JCB	01/15/97	1622	96115	2
Acenaphthylene	U	0.00	162	330	ug/kg	1.0					
Anthracene	U	0.00	162	330	ug/kg	1.0					
Benzo(a)anthracene	U	0.00	162	330	ug/kg	1.0					
Benzo(a)pyrene	U	0.00	162	330	ug/kg	1.0					
Benzo(b)fluoranthene	U	0.00	162	330	ug/kg	1.0					
Benzo(ghi)perylene	U	0.00	162	330	ug/kg	1.0					
Benzo(k)fluoranthene	U	0.00	162	330	ug/kg	1.0					
Chrysene	U	0.00	162	330	ug/kg	1.0					
Dibenzo(a,h)anthracene	U	0.00	162	330	ug/kg	1.0					
Fluoranthene	U	0.00	162	330	ug/kg	1.0					
Fluorene	U	0.00	162	330	ug/kg	1.0					
Indeno(1,2,3-c,d)pyrene	U	0.00	162	330	ug/kg	1.0					
Naphthalene	U	0.00	162	330	ug/kg	1.0					
Phenanthrene	U	0.00	162	330	ug/kg	1.0					
Pyrene	U	0.00	162	330	ug/kg	1.0					

The following prep procedures were performed:

C/MS Base/Neutral Compounds

MS 01/13/97 1600 96115 3

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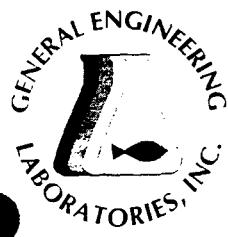
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9701143-03



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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/8745,
NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: January 20, 1997

Page 2 of 2

Sample ID : SPORT0288-3

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	101.	(30.0 - 115.)
Nitrobenzene-d5	M610	95.9	(23.0 - 120.)
p-Terphenyl-d14	M610	105.	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	108.	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	98.0	(63.4 - 136.)
Toluene-d8	BTEX-8260	97.2	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	108.	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	98.0	(63.4 - 136.)
Toluene-d8	NAP-8260	97.2	(72.1 - 137.)

M = Method Method-Description

M 1	EPA 8260
M 2	EPA 8270
M 3	EPA 3550

Notes:

The qualifiers in this report are defined as follows:

ND indicates that the analyte was not detected at a concentration greater than the detection limit.

J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).

U indicates that the analyte was not detected at a concentration greater than the detection limit.

* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed
in accordance with General Engineering Laboratories
standard operating procedures. Please direct
any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

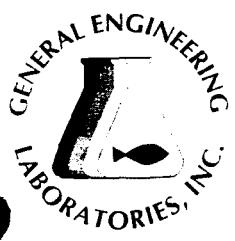
Karen Blakeney
Reviewed By

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Laboratory Certifications

STATE	GEL	EPI
FL	E87156/87294	E87472/874
NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
 SUPSHIP-Portsmouth Detachment-Env.
 1899 North Hobson Ave.
 North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: January 20, 1997

Page 1 of 2

Sample ID	:	SPORT0288-4
Lab ID	:	9701143-04
Matrix	:	Soil
Date Collected	:	01/08/97
Date Received	:	01/09/97
Priority	:	Routine
Collector	:	Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
<i>BTEX - 4 items</i>											
Benzene	U	0.00	1.00	2.00	ug/kg	1.0	RMB	01/10/97	1747	96085	1
Ethylbenzene	U	0.00	1.00	2.00	ug/kg	1.0					
Toluene	U	0.00	1.00	2.00	ug/kg	1.0					
Xylenes (TOTAL)	U	0.00	1.00	4.00	ug/kg	1.0					
Naphthalene	U	0.00	1.00	2.00	ug/kg	1.0					
Extractable Organics											
<i>Polynuclear Aromatic Hydrocarbons - 16 items</i>											
Acenaphthene	U	0.00	165	330	ug/kg	1.0	JCB	01/14/97	1911	96115	2
Acenaphthylene	U	0.00	165	330	ug/kg	1.0					
Anthracene	U	0.00	165	330	ug/kg	1.0					
Benzo(a)anthracene	U	0.00	165	330	ug/kg	1.0					
Benzo(a)pyrene	U	0.00	165	330	ug/kg	1.0					
Benzo(b)fluoranthene	U	0.00	165	330	ug/kg	1.0					
Benzo(ghi)perylene	U	0.00	165	330	ug/kg	1.0					
Benzo(k)fluoranthene	U	0.00	165	330	ug/kg	1.0					
Chrysene	U	0.00	165	330	ug/kg	1.0					
Dibenzo(a,h)anthracene	U	0.00	165	330	ug/kg	1.0					
Fluoranthene	U	0.00	165	330	ug/kg	1.0					
Fluorene	U	0.00	165	330	ug/kg	1.0					
Indeno(1,2,3-c,d)pyrene	U	0.00	165	330	ug/kg	1.0					
Naphthalene	U	0.00	165	330	ug/kg	1.0					
Phenanthrene	U	0.00	165	330	ug/kg	1.0					
Pyrene	U	0.00	165	330	ug/kg	1.0					

The following prep procedures were performed:

GC/MS Base/Neutral Compounds

MS 01/13/97 1600 96115 3

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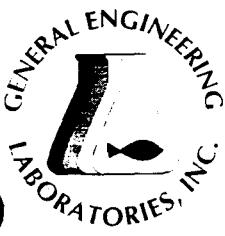
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FL	E87156/87294	E87472/874.
NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: January 20, 1997

Page 2 of 2

Sample ID : SPORT0288-4

Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	76.4	(30.0 - 115.)
Nitrobenzene-d5	M610	61.4	(23.0 - 120.)
p-Terphenyl-d14	M610	75.4	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	108.	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	92.4	(63.4 - 136.)
Toluene-d8	BTEX-8260	96.0	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	108.	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	92.4	(63.4 - 136.)
Toluene-d8	NAP-8260	96.0	(72.1 - 137.)

M = Method	Method-Description
M 1	EPA 8260
M 2	EPA 8270
M 3	EPA 3550

Notes:

The qualifiers in this report are defined as follows:

ND indicates that the analyte was not detected at a concentration greater than the detection limit.

J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).

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* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed
in accordance with General Engineering Laboratories
standard operating procedures. Please direct
any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

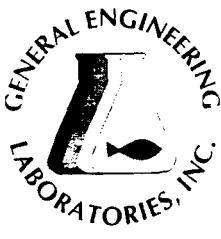
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NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
 SUPSHIP-Portsmouth Detachment-Env.
 1899 North Hobson Ave.
 North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: January 20, 1997

Page 1 of 2

Sample ID	:	SPORT0288-5
Lab ID	:	9701143-05
Matrix	:	GroundH2O
Date Collected	:	01/08/97
Date Received	:	01/09/97
Priority	:	Routine
Collector	:	Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
<i>BTEX - 4 items</i>											
Benzene	U	0.00		1.00	ug/l	1.0	JGS	01/16/97	1007	96232	1
Ethylbenzene	U	0.00		1.00	ug/l	1.0					
Toluene	U	0.00		1.00	ug/l	1.0					
Xylenes (TOTAL)	U	0.00		1.00	ug/l	1.0					
Methyl Tert Butyl Ether	U	0.00		1.00	ug/l	1.0					
Naphthalene	J	1.87		1.00	ug/l	1.0					

Surrogate Recovery	Test	Percent%	Acceptable Limits
Bromofluorobenzene	BTEX-8260	103.	(73.8 - 128.)
Dibromofluoromethane	BTEX-8260	110.	(63.9 - 139.)
Toluene-d8	BTEX-8260	99.0	(77.1 - 121.)
Bromofluorobenzene	MTBE-8260	103.	(73.8 - 128.)
Dibromofluoromethane	MTBE-8260	110.	(63.9 - 139.)
Toluene-d8	MTBE-8260	99.0	(77.1 - 121.)
Bromofluorobenzene	NAP-8260	103.	(73.8 - 128.)
Dibromofluoromethane	NAP-8260	110.	(63.9 - 139.)
Toluene-d8	NAP-8260	99.0	(77.1 - 121.)

M = Method

Method-Description

M 1

EPA 8260

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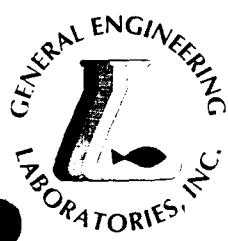
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NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: January 20, 1997

Page 2 of 2

Sample ID : SPORT0288-5

M = Method

Method-Description

Notes:

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* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

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any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

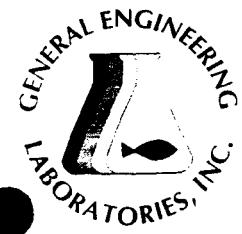
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NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: January 20, 1997

Page 1 of 2

Sample ID : SPORT0288-6
Lab ID : 9701143-06
Matrix : Soil
Date Collected : 01/08/97
Date Received : 01/09/97
Priority : Routine
Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
<i>BTEX - 4 items</i>											
Benzene	U	0.00		1.00	ug/kg	1.0	RMB	01/10/97	1818	96085	1
Methylbenzene	U	0.00		1.00	ug/kg	1.0					
Toluene	U	0.00		1.00	ug/kg	1.0					
Xylenes (TOTAL)	U	0.00		1.00	ug/kg	1.0					
Naphthalene	U	0.00		1.00	ug/kg	1.0					

Surrogate Recovery	Test	Percent %	Acceptable Limits
Bromofluorobenzene	BTEX-8260	105.	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	90.0	(63.4 - 136.)
Toluene-d8	BTEX-8260	95.2	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	105.	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	90.0	(63.4 - 136.)
Toluene-d8	NAP-8260	95.2	(72.1 - 137.)

M = Method

Method-Description

M 1

EPA 8260

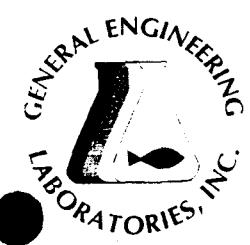
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STATE	GEL	EPI
FL	E87156/87294	E87472/8745
NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: January 20, 1997

Page 2 of 2

Sample ID : SPORT0288-6

M = Method

Method-Description

Notes:

The qualifiers in this report are defined as follows:

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Karen Blakeney
Reviewed By

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CHAIN OF CUSTODY RECORD

9701143

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Charleston, South Carolina 29414
P.O. Box 30712
Charleston, South Carolina 29417
(803) 556-8171

Relinquished by:

Date

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Received by lab by:
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— 1 —

White = sample collector

Yellow = file

Pink = with report

Navy Public Works Center

Environmental Laboratory

Bldg. 3887, Code 920
 NAS Pensacola, FL 32508
 Phone (904) 452-4728/3642
 DSN 922-4728/3642
 FAX (904) 452-2799/2387

Client: SPORTENVDETCASN Lab
 Address: 1899 North Hobson Ave.
 N. Charleston, S.C. 29405-2106
 Phone #: (803) 743-3239 ext. 26
 Contact: Fred McLean

Analytical Report

610 PAH's by Method 8270

Lab Report Number: 70373
 Sample Date: 01/16/97
 Received Date: 01/22/97
 Sample Site: Char. Naval Station, S.C.
 Job Order No.: 127 4021

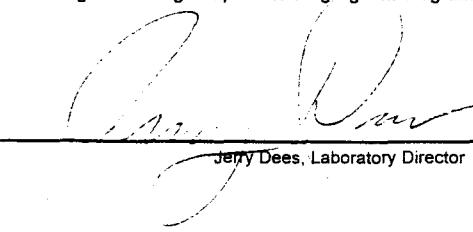
LAB Sample ID#	1- 70373			
Sample Name / Location	97CNS006-1 UST NS28B-7			
Collector's Name	Nesbitt			
Date & Time Collected	01/16/97 @ 0915			
Sample Type (composite or grab)	Grab			
Analyst	M. Chambers			
Date of Extraction / Initials	01/29/97 JJ			
Date of Analysis	02/03/97			
Sample Matrix	Soil			
Dilution	X 6			
Compound Name	1- 70373	units	Det. Limit	Flags
Acenaphthene	2000	ug/Kg	960	
Acenaphthylene	BDL	ug/Kg	1140	
Anthracene	BDL	ug/Kg	1020	
Benzo(a)anthracene	BDL	ug/Kg	960	
Benzo(a)pyrene	BDL	ug/Kg	1080	
Benzo(b)fluoranthene	BDL	ug/Kg	960	
Benzo(g,h,i)perylene	BDL	ug/Kg	1080	
Benzo(k)fluoranthene	BDL	ug/Kg	1260	
Chrysene	BDL	ug/Kg	1020	
Dibenz(a,h)anthracene	BDL	ug/Kg	1020	
Fluoranthene	BDL	ug/Kg	1080	
Fluorene	2400	ug/Kg	960	
Indeno(1,2,3-cd)pyrene	BDL	ug/Kg	1080	
1-Methylnaphthalene *	2800	ug/Kg	1200	
2-Methylnaphthalene	BDL	ug/Kg	1320	
Naphthalene	BDL	ug/Kg	960	
Phenanthrene	7800	ug/Kg	1080	
Pyrene	2400	ug/Kg	1200	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Nitrobenzene-d5	23-120	115
2-Fluorobiphenyl	30-115	111
Terphenyl-d14	18-137	87

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : 

Jerry Dees, Laboratory Director

Date: 2/10/97

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Navy Public Works Center

Environmental Laboratory

Bldg. 3887, Code 920
 NAS Pensacola, FL 32508 - 6500
 Phone (904) 452-4728/3642
 DSN 922-4728/3642
 FAX 452-2783

Client: SPORTEENVDETCHASN Lab
 Address: 1899 North Hobson Ave.
 N. Charleston, S.C. 29405-2106
 Phone #: (803) 743-3239 ext. 26
 Contact: Fred McLean

Analytical Report

BETX & Naphthalene by Method 8260

Lab Report Number:	70373
Sample Date:	01/16/97
Received Date:	01/22/97
Sample Site:	Char. Naval Station, S.C.
Job Order No.:	127 4021

LAB Sample ID#	1- 70373			
Sample Name / Location	97CNS006-1 UST NS28B-7			
Collector's Name	Nesbitt			
Date & Time Collected	01/16/97 @ 0915			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of Extraction / Initials	01/30/97 JM			
Date of Analysis	01/30/97			
Sample Matrix	Soil			
Dilution	X 5			
Compound	1- 70373	units	Det.	Flags
Name				
Benzene	BDL	ug/Kg	5	
Ethylbenzene	BDL	ug/Kg	10	
Toluene	BDL	ug/Kg	20	
m,p-Xylene	BDL	ug/Kg	20	
o-Xylene	BDL	ug/Kg	10	
Naphthalene	BDL	ug/Kg	20	

SURROGATE SPIKE RECOVERIES

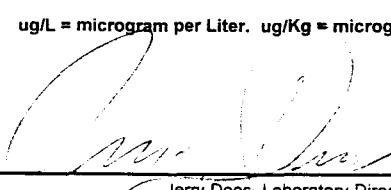
	Acceptance Limits	Percent Recovery
1,2-Dichloroethane-d4	75-133	94
Toluene-d8	86-119	103
Bromofluorobenzene	85-116	92

Explanation of Flags:

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by :


Jerry Dees, Laboratory Director

Date: 2/7/97

Report Generated

Navy Public Works Center

Environmental Laboratory

Bldg. 3887, Code 920
 NAS Pensacola, FL 32508 - 6500
 Phone (904) 452-4728/3642
 DSN 922-4728/3642
 FAX 452-2783

Client: SPORTENVDETCHASN Lab
 Address: 1899 North Hobson Ave.
 N. Charleston, S.C. 29405-2106
 Phone #: (803) 743-3239 ext. 26
 Contact: Fred McLean

Analytical Report

BETX & Naphthalene by Method 8260

Lab Report Number: 70374
 Sample Date: 01/16/97
 Received Date: 01/22/97
 Sample Site: Char. Naval Station, S.C.
 Job Order No.: 127 4021

LAB Sample ID#	1- 70374						
Sample Name / Location	97CNS006-2 UST NS28B-8						
Collector's Name	Nesbitt						
Date & Time Collected	01/16/97 @ 0940						
Sample Type (composite or grab)	Grab						
Analyst	J. Moore						
Date of Extraction / Initials	01/30/97 JM						
Date of Analysis	01/30/97						
Sample Matrix	Soil						
Dilution	X 5						
Compound	1- 70374	units	Det.	Flags			
Name			Limit				
Benzene	BDL	ug/Kg	5				
Ethylbenzene	BDL	ug/Kg	10				
Toluene	BDL	ug/Kg	20				
m,p-Xylene	BDL	ug/Kg	20				
o-Xylene	BDL	ug/Kg	10				
Naphthalene	BDL	ug/Kg	20				

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
1,2-Dichloroethane-d4	75-133	113
Toluene-d8	86-119	106
Bromofluorobenzene	85-116	96

Explanation of Flags:

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by :

Jerry Bees
Jerry Bees, Laboratory Director

Date: 2/7/97

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Navy Public Works Center

Environmental Laboratory

Bldg. 3887, Code 920
 NAS Pensacola, FL 32508
 Phone (904) 452-4728/3642
 DSN 922-4728/3642
 FAX (904) 452-2799/2387

Client: SPORTEENVDETCHASN Lab
 Address: 1899 North Hobson Ave.
 N. Charleston, S.C. 29405-2106
 Phone #: (803) 743-3239 ext. 26
 Contact: Fred McLean

Analytical Report

610 PAH's by Method 8270

Lab Report Number: 70374
 Sample Date: 01/16/97
 Received Date: 01/22/97
 Sample Site: Char. Naval Station, S.C.
 Job Order No.: 127 4021

LAB Sample ID#	1- 70374			
Sample Name / Location	97CNS006-2 UST NS28B-8			
Collector's Name	Nesbitt			
Date & Time Collected	01/16/97 @ 0940			
Sample Type (composite or grab)	Grab			
Analyst	M. Chambers			
Date of Extraction / Initials	01/29/97 JJ			
Date of Analysis	02/03/97			
Sample Matrix	Soil			
Dilution	X 1			
Compound Name	1- 70374	units	Det. Limit	Flags
Acenaphthene	BDL	ug/Kg	160	
Acenaphthylene	BDL	ug/Kg	190	
Anthracene	BDL	ug/Kg	170	
Benzo(a)anthracene	BDL	ug/Kg	160	
Benzo(a)pyrene	BDL	ug/Kg	180	
Benzo(b)fluoranthene	BDL	ug/Kg	160	
Benzo(g,h,i)perylene	BDL	ug/Kg	180	
Benzo(k)fluoranthene	BDL	ug/Kg	210	
Chrysene	BDL	ug/Kg	170	
Dibenz(a,h)anthracene	BDL	ug/Kg	170	
Fluoranthene	BDL	ug/Kg	180	
Fluorene	BDL	ug/Kg	160	
Indeno(1,2,3-cd)pyrene	BDL	ug/Kg	180	
1-Methylnaphthalene *	BDL	ug/Kg	200	
2-Methylnaphthalene	BDL	ug/Kg	220	
Naphthalene	BDL	ug/Kg	160	
Phenanthrene	BDL	ug/Kg	180	
Pyrene	BDL	ug/Kg	200	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Nitrobenzene- d5	23-120	60
2-Fluorobiphenyl	30-115	103
Terphenyl -d14	18-137	76

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by :

Jerry Dees, Laboratory Director

Date: 2/7/97

Report Generated

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Environmental Laboratory**

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Phone #: (803) 743-3239 ext. 26
Contact: Fred McLean

Analytical Report

**BETX & Naphthalene
by Method 8260**

Lab Report Number:	70375
Sample Date:	01/16/97
Received Date:	01/22/97
Sample Site:	Char. Naval Station, S.C.
Job Order No.:	127 4021

LAB Sample ID#	1- 70375						
Sample Name / Location	97CNS006-3 UST NS28B-9						
Collector's Name	Nesbitt						
Date & Time Collected	01/16/97 @ 1010						
Sample Type (composite or grab)	Grab						
Analyst	J. Moore						
Date of Extraction / Initials	01/30/97 JM						
Date of Analysis	01/30/97						
Sample Matrix	Soil						
Dilution	X 5						
Compound	1- 70375	units	Det. Limit	Flags			
Name							
Benzene	250	ug/Kg	5				
Ethylbenzene	4900	ug/Kg	2000				
Toluene	BDL	ug/Kg	20				
m,p-Xylene	2100	ug/Kg	4000				
<i>o</i> -Xylene	110	ug/Kg	10				
Naphthalene	47000	ug/Kg	4000				

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
1,2-Dichloroethane-d4	75-133	99
Toluene-d8	86-119	110
Bromofluorobenzene	85-116	110

Explanation of Flags:

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by :

Jerry Dees, Laboratory Director

Date: 2/10/97

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Analytical Report

610 PAH's by Method 8270

Lab Report Number: 70375
 Sample Date: 01/16/97
 Received Date: 01/22/97
 Sample Site: Char. Naval Station, S.C.
 Job Order No.: 127 4021

LAB Sample ID#	1- 70375			
Sample Name / Location	97CNS006-3 UST NS28B-9			
Collector's Name	Nesbitt			
Date & Time Collected	01/16/97 @ 1010			
Sample Type (composite or grab)	Grab			
Analyst	M. Chambers			
Date of Extraction / Initials	01/29/97 JJ			
Date of Analysis	02/03/97			
Sample Matrix	Soil			
Dilution	X 100			
Compound Name	1- 70375	units	Det. Limit	Flags
Acenaphthene	BDL	ug/Kg	16000	
Acenaphthylene	BDL	ug/Kg	19000	
Anthracene	BDL	ug/Kg	17000	
Benzo(a)anthracene	BDL	ug/Kg	16000	
Benzo(a)pyrene	BDL	ug/Kg	18000	
Benzo(b)fluoranthene	BDL	ug/Kg	16000	
Benzo(g,h,i)perylene	BDL	ug/Kg	18000	
Benzo(k)fluoranthene	BDL	ug/Kg	21000	
Chrysene	BDL	ug/Kg	17000	
Dibenz(a,h)anthracene	BDL	ug/Kg	17000	
Fluoranthene	BDL	ug/Kg	18000	
Fluorene	BDL	ug/Kg	16000	
Indeno(1,2,3-cd)pyrene	BDL	ug/Kg	18000	
1-Methylnaphthalene *	100000	ug/Kg	20000	
2-Methylnaphthalene	160000	ug/Kg	22000	
Naphthalene	33000	ug/Kg	16000	
Phenanthrene	40000	ug/Kg	18000	
Pyrene	BDL	ug/Kg	20000	

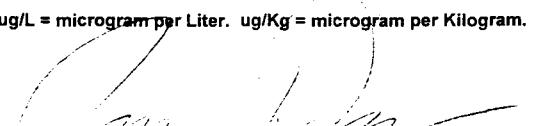
SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Nitrobenzene- d5	23-120	36
2-Fluorobiphenyl	30-115	65
Terphenyl -d14	18-137	52

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by:


Jerry Dees, Laboratory Director

Date: 2/10/97

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End of Report

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 Contact: Fred McLean

Analytical Report

610 PAH's by Method 8270

Lab Report Number: 70376
 Sample Date: 01/16/97
 Received Date: 01/22/97
 Sample Site: Char. Naval Station, S.C.
 Job Order No.: 127 4021

LAB Sample ID#	1- 70376			
Sample Name / Location	97CNS006-4 UST NS28B-10			
Collector's Name	Nesbitt			
Date & Time Collected	01/16/97 @ 1033			
Sample Type (composite or grab)	Grab			
Analyst	M. Chambers			
Date of Extraction / Initials	01/29/97 JJ			
Date of Analysis	02/03/97			
Sample Matrix	Soil			
Dilution	X 1			
Compound Name	1- 70376	units	Det. Limit	Flags
Acenaphthene	BDL	ug/Kg	160	
Acenaphthylene	BDL	ug/Kg	190	
Anthracene	BDL	ug/Kg	170	
Benzo(a)anthracene	380	ug/Kg	160	
Benzo(a)pyrene	370	ug/Kg	180	
Benzo(b)fluoranthene	510	ug/Kg	160	
Benzo(g,h,i)perylene	130	ug/Kg	180	
Benzo(k)fluoranthene	530	ug/Kg	210	
Chrysene	440	ug/Kg	170	
Dibenz(a,h)anthracene	BDL	ug/Kg	170	
Fluoranthene	830	ug/Kg	180	
Fluorene	BDL	ug/Kg	160	
Indeno(1,2,3-cd)pyrene	130	ug/Kg	180	
1-Methylnaphthalene *	BDL	ug/Kg	200	
2-Methylnaphthalene	BDL	ug/Kg	220	
Naphthalene	BDL	ug/Kg	160	
Phenanthrene	660	ug/Kg	180	
Pyrene	630	ug/Kg	200	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Nitrobenzene- d5	23-120	41
2-Fluorobiphenyl	30-115	88
Terphenyl -d14	18-137	60

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by :


Jerry Dees, Laboratory Director

Date: 2/10/97

Report Generated

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 Phone #: (803) 743-3239 ext. 26
 Contact: Fred McLean

Analytical Report

BETX & Naphthalene by Method 8260

Lab Report Number:	70376
Sample Date:	01/16/97
Received Date:	01/22/97
Sample Site:	Char. Naval Station, S.C.
Job Order No.:	127 4021

LAB Sample ID#	1- 70376			
Sample Name / Location	97CNS006-4 UST NS28B-10			
Collector's Name	Nesbitt			
Date & Time Collected	01/16/97 @ 1033			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of Extraction / Initials	01/30/97 JM			
Date of Analysis	01/30/97			
Sample Matrix	Soil			
Dilution	X 1			
Compound	1- 70376	units	Det.	Flags
Name				
Benzene	BDL	ug/Kg	1	
Ethylbenzene	BDL	ug/Kg	2	
Toluene	BDL	ug/Kg	4	
m,p-Xylene	BDL	ug/Kg	4	
o-Xylene	BDL	ug/Kg	2	
Naphthalene	BDL	ug/Kg	4	

SURROGATE SPIKE RECOVERIES

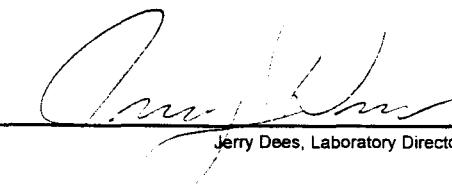
	Acceptance Limits	Percent Recovery
1,2-Dichloroethane-d4	75-133	114
Toluene-d8	86-119	106
Bromofluorobenzene	85-116	99

Explanation of Flags:

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by :


Jerry Dees, Laboratory Director

Date: 2/7/97
Report Generated

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

NPWC Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508
Ph#: (904) 452-4728/3642
DSN: 922-4728/3642
FAX: (904) 452-2799/2367

Requester:

SPORTENVDETCHASN Lab

Report Required? Yes No QC Report? Yes No

Address:

1899 North Hobson Avenue

Lab ID Number:

1-16-97

Phone #:

N. Charleston, S.C. 29405-2106

Sample Date:

1-16-97

Contact:

(803) 743-3239 ext. 26

Received Date:

1-16-97

Job Order #:

Mr. Fred McLean

Sample Site:

CHAS. NAVAL STATION

Lab Due Date:

1-16-97

Sample ID #	Lab	#1- 7-0373	#2- 7-0374	#3- 7-0375	#4- 7-0376	Note:
Sample Name		97CN5006-1 UST	97CN5006-2 UST	97CN5006-3 UST	97CN5006-4 UST	
or Location		NS28B-7	NS28B-8	NS28B-9	NS28B-10	
Sampled by		Nesbitt	Nesbitt	Nesbitt	Nesbitt	
Collection	Date	1/16/97	1/16/97	1/16/97	1/16/97	
	Time	0915	0940	1010	1033	
Sample Matrix		Soil	Soil	Soil	Soil	
GROUP PARAMETERS						
by Method Name	METHOD #	X	Bottle ID #'s	X	Bottle ID #'s	X
HW Charact. (complete)	EPA SW 846					
Ignitability (Flashpoint)	SW 846 1010					
Reactivity (Cyanide & Sulfide)	EPA SW-846					
Corrosivity (pH)	SW 846 9040/9045					
Toxicity (TCLP) complete	EPA SW-846					
Toxicity (TCLP) complete	EPA SW-846					
Toxicity (TCLP) less Pest/Herb	EPA SW-846					
TCLP B/N Extractables	SW 846 8270					
TCLP Acid Extractables	SW 846 8270					
TCLP B/N Extractables	SW 846 8270					
TCLP Pesticides	SW 846 8080					
TCLP Herbicides	SW 846 8150					
TCLP Volatiles	SW 846 8260					
TCLP Metals (6)	EPA SW-846					
F001 - F005 Solvents	EPA SW-846					
Total Volatiles	SW 846 8250					
BTEx & Naphthalene	SW 846 8260	X 97CN5006-1	X 97CN5006-2	X 97CN5006-3	X 97CN5006-4	
Total BNA Extractables	SW 846 8270					
PAH's	SW 846 8270	X 97CN5006-1	X 97CN5006-2	X 97CN5006-3	X 97CN5006-4	
PCB's In Oil	SW 846 8080					
PCB's In Water/Soil/Wipes	SW 846 8080					
Total RCRA Metals (6)	EPA SW-846					
Asbestos (Bulk)						
TPH (IR)	EPA 418.1					
Oil & Grease	EPA 413.1					
Lead in Paint	SW 846 6010					
Total Organic Halogens	EPA SW-846					
Other:						

Comments:

2.2. Nesbitt 1-16-97 1430 Accepted by: John F. McLean Jr.

4/16/97 @ 1430 hrs

Reinforced by:

John F. McLean Jr.

Received by:

John F. McLean Jr.

Date/Time:

1/16/97 @ 0800hrs

Date/Time:

1/16/97 1430

Navy Public Works Center

Environmental Laboratory

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 N. Charleston, S.C. 29405-2106
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 Contact: Fred McLean

Analytical Report

BETX & Naphthalene by Method 8260

Lab Report Number: 70377
 Sample Date: 01/16/97
 Received Date: 01/22/97
 Sample Site: Char. Naval Station, S.C.
 Job Order No.: 127 4021

LAB Sample ID#	1-	70377					
Sample Name / Location	97CNS006-5 UST NS28B-11						
Collector's Name	Nesbitt						
Date & Time Collected	01/16/97 @ 1100						
Sample Type (composite or grab)	Grab						
Analyst	J. Moore						
Date of Extraction / Initials	01/30/97 JM						
Date of Analysis	01/30/97						
Sample Matrix	Soil						
Dilution	X 1						
Compound	1-	70377	Det.	Flags			
Name	units	Limit					
Benzene	ug/Kg	1					
Ethylbenzene	ug/Kg	2					
Toluene	ug/Kg	4					
m,p-Xylene	ug/Kg	4					
o-Xylene	ug/Kg	2					
Naphthalene	ug/Kg	4					

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
1,2-Dichloroethane-d4	75-133	114
Toluene-d8	86-119	107
Bromoflurobenzene	85-116	94

Explanation of Flags:

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by :

Jerry Dees, Laboratory Director

Date: 2/7/97

Report Generated

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 Contact: Fred McLean

Analytical Report

610 PAH's by Method 8270

Lab Report Number: 70377
 Sample Date: 01/16/97
 Received Date: 01/22/97
 Sample Site: Char. Naval Station, S.C.
 Job Order No.: 127 4021

LAB Sample ID#	1- 70377			
Sample Name / Location	97CNS006-5 UST NS28B-11			
Collector's Name	Nesbitt			
Date & Time Collected	01/16/97 @ 1100			
Sample Type (composite or grab)	Grab			
Analyst	M. Chambers			
Date of Extraction / Initials	01/29/97 JJ			
Date of Analysis	02/03/97			
Sample Matrix	Soil			
Dilution	X 1			
Compound Name	1-	70377	Det. Limit	Flags
Acenaphthene	BDL	ug/Kg	160	
Acenaphthylene	BDL	ug/Kg	190	
Anthracene	BDL	ug/Kg	170	
Benzo(a)anthracene	BDL	ug/Kg	160	
Benzo(a)pyrene	BDL	ug/Kg	180	
Benzo(b)fluoranthene	BDL	ug/Kg	160	
Benzo(g,h,i)perylene	BDL	ug/Kg	180	
Benzo(k)fluoranthene	BDL	ug/Kg	210	
Chrysene	BDL	ug/Kg	170	
Dibenz(a,h)anthracene	BDL	ug/Kg	170	
Fluoranthene	BDL	ug/Kg	180	
Fluorene	BDL	ug/Kg	160	
Indeno(1,2,3-cd)pyrene	BDL	ug/Kg	180	
1-Methylnaphthalene *	BDL	ug/Kg	200	
2-Methylnaphthalene	BDL	ug/Kg	220	
Naphthalene	BDL	ug/Kg	160	
Phenanthrene	BDL	ug/Kg	180	
Pyrene	BDL	ug/Kg	200	

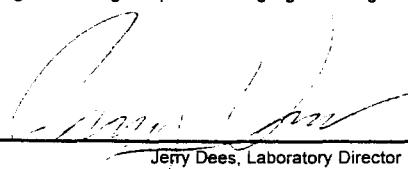
SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Nitrobenzene- d5	23-120	49
2-Fluorobiphenyl	30-115	98
Terphenyl -d14	18-137	63

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by :


Jerry Dees, Laboratory Director

Date: 2/10/97

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 Contact: Fred McLean

Analytical Report

BETX & Naphthalene by Method 8260

Lab Report Number:	70378
Sample Date:	01/16/97
Received Date:	01/22/97
Sample Site:	Char. Naval Station, S.C.
Job Order No.:	127 4021

LAB Sample ID#	1- 70378
Sample Name / Location	97CNS006-6 UST NS28B-12
Collector's Name	Nesbitt
Date & Time Collected	01/16/97 @ 1117
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	01/30/97 JM
Date of Analysis	01/30/97
Sample Matrix	Soil
Dilution	X 1
Compound Name	1- 70378
	units
Benzene	BDL
Ethylbenzene	BDL
Toluene	BDL
m,p-Xylene	BDL
o-Xylene	BDL
Naphthalene	BDL
	ug/Kg
	1
	2
	4
	4
	2
	4

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
1,2-Dichloroethane-d4	75-133	105
Toluene-d8	86-119	111
Bromofluorobenzene	85-116	91

Explanation of Flags:

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by :

Jerry Dees, Laboratory Director

Date: 2/7/97

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 Contact: Fred McLean

Analytical Report

610 PAH's by Method 8270

Lab Report Number: 70378
 Sample Date: 01/16/97
 Received Date: 01/22/97
 Sample Site: Char. Naval Station, S.C.
 Job Order No.: 127 4021

LAB Sample ID#	1-	70378					
Sample Name / Location	97CNS006-6 UST NS28B-12						
Collector's Name	Nesbitt						
Date & Time Collected	01/16/97 @ 1117						
Sample Type (composite or grab)	Grab						
Analyst	M. Chambers						
Date of Extraction / Initials	01/29/97 JJ						
Date of Analysis	02/04/97						
Sample Matrix	Soil						
Dilution	X 10						
Compound Name	1-	70378	units	Det. Limit Flags			
Acenaphthene	BDL	ug/Kg	1600				
Acenaphthylene	BDL	ug/Kg	1900				
Anthracene	BDL	ug/Kg	1700				
Benzo(a)anthracene	BDL	ug/Kg	1600				
Benzo(a)pyrene	BDL	ug/Kg	1800				
Benzo(b)fluoranthene	BDL	ug/Kg	1600				
Benzo(g,h,i)perylene	BDL	ug/Kg	1800				
Benzo(k)fluoranthene	BDL	ug/Kg	2100				
Chrysene	BDL	ug/Kg	1700				
Dibenz(a,h)anthracene	BDL	ug/Kg	1700				
Fluoranthene	BDL	ug/Kg	1800				
Fluorene	BDL	ug/Kg	1600				
Indeno(1,2,3-cd)pyrene	BDL	ug/Kg	1800				
1-Methylnaphthalene *	BDL	ug/Kg	2000				
2-Methylnaphthalene	BDL	ug/Kg	2200				
Naphthalene	BDL	ug/Kg	1600				
Phenanthrene	BDL	ug/Kg	1800				
Pyrene	BDL	ug/Kg	2000				

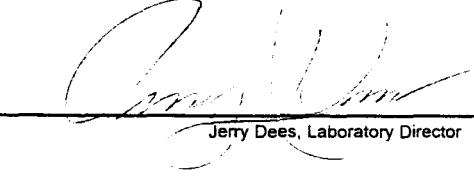
SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Nitrobenzene- d5	23-120	56
2-Fluorobiphenyl	30-115	113
Terphenyl -d14	18-137	95

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by :


Jerry Dees, Laboratory Director

Date: 2/11/97

Report Generated

**Navy Public Works Center
Environmental Laboratory**

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Phone (904) 452-4728/3642
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Client: SPORTENVDETCASN Lab
Address: 1899 North Hobson Ave.
N. Charleston, S.C. 29405-2106
Phone #: (803) 743-3239 ext. 26
Contact: Fred McLean

Analytical Report

**BETX & Naphthalene
by Method 8260**

Lab Report Number:	70379
Sample Date:	01/16/97
Received Date:	01/22/97
Sample Site:	Char. Naval Station, S.C.
Job Order No.:	127 4021

LAB Sample ID#	1- 70379						
Sample Name / Location	97CNS006-7 UST NS28B-13						
Collector's Name	Nesbitt						
Date & Time Collected	01/16/97 @ 1135						
Sample Type (composite or grab)	Grab						
Analyst	J. Moore						
Date of Extraction / Initials	01/30/97 JM						
Date of Analysis	01/30/97						
Sample Matrix	Soil						
Dilution	X 1						
Compound	1- 70379	units	Det. Limit	Flags			
Name							
Benzene	BDL	ug/Kg	1				
Ethylbenzene	BDL	ug/Kg	2				
Toluene	BDL	ug/Kg	4				
m,p-Xylene	BDL	ug/Kg	4				
o-Xylene	BDL	ug/Kg	2				
Naphthalene	BDL	ug/Kg	4				

SURROGATE SPIKE RECOVERIES

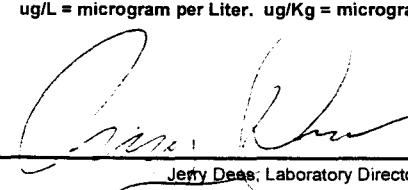
	Acceptance Limits	Percent Recovery
1,2-Dichloroethane-d4	75-133	117
Toluene-d8	86-119	104
Bromofluorobenzene	85-116	101

Explanation of Flags:

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by :


Jerry Deas, Laboratory Director

Date: 2/7/97

Report Generated

Navy Public Works Center

Environmental Laboratory

Bldg. 3887, Code 920
 NAS Pensacola, FL 32508
 Phone (904) 452-4728/3642
 DSN 922-4728/3642
 FAX (904) 452-2799/2387

Client: SPORTENVDETCHASN Lab
 Address: 1899 North Hobson Ave.
 N. Charleston, S.C. 29405-2106
 Phone #: (803) 743-3239 ext. 26
 Contact: Fred McLean

Analytical Report

610 PAH's by Method 8270

Lab Report Number: 70379
 Sample Date: 01/16/97
 Received Date: 01/22/97
 Sample Site: Char. Naval Station, S.C.
 Job Order No.: 127 4021

LAB Sample ID#	1- 70379			
Sample Name / Location	97CNS006-7 UST NS28B-13			
Collector's Name	Nesbitt			
Date & Time Collected	01/16/97 @ 1135			
Sample Type (composite or grab)	Grab			
Analyst	M. Chambers			
Date of Extraction / Initials	01/29/97 JJ			
Date of Analysis	02/04/97			
Sample Matrix	Soil			
Dilution	X 1			
Compound Name	1- 70379	units	Det. Limit	Flags
Acenaphthene	BDL	ug/Kg	160	
Acenaphthylene	BDL	ug/Kg	190	
Anthracene	BDL	ug/Kg	170	
Benzo(a)anthracene	BDL	ug/Kg	160	
Benzo(a)pyrene	BDL	ug/Kg	180	
Benzo(b)fluoranthene	BDL	ug/Kg	160	
Benzo(g,h,i)perylene	BDL	ug/Kg	180	
Benzo(k)fluoranthene	BDL	ug/Kg	210	
Chrysene	BDL	ug/Kg	170	
Dibenz(a,h)anthracene	BDL	ug/Kg	170	
Fluoranthene	BDL	ug/Kg	180	
Fluorene	BDL	ug/Kg	160	
Indeno(1,2,3-cd)pyrene	BDL	ug/Kg	180	
1-Methylnaphthalene *	BDL	ug/Kg	200	
2-Methylnaphthalene	BDL	ug/Kg	220	
Naphthalene	BDL	ug/Kg	160	
Phenanthrene	BDL	ug/Kg	180	
Pyrene	BDL	ug/Kg	200	

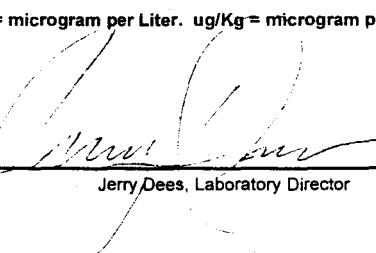
SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Nitrobenzene- d5	23-120	72
2-Fluorobiphenyl	30-115	97
Terphenyl -d14	18-137	72

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by:


 Jerry Dees, Laboratory Director

Date: 2/10/97

Report Generated

Navy Public Works Center

Environmental Laboratory

Bldg. 3887, Code 920
 NAS Pensacola, FL 32508 - 6500
 Phone (904) 452-4728/3642
 DSN 922-4728/3642
 FAX 452-2783

Client: SPORTEENVDETCHASN Lab
 Address: 1899 North Hobson Ave.
 N. Charleston, S.C. 29405-2106
 Phone #: (803) 743-3239 ext. 26
 Contact: Fred McLean

Analytical Report

BETX & Naphthalene by Method 8260

Lab Report Number: 70380
 Sample Date: 01/16/97
 Received Date: 01/22/97
 Sample Site: Char. Naval Station, S.C.
 Job Order No.: 127 4021

LAB Sample ID#	1-	70380					
Sample Name / Location	97CNS006-8 UST NS28B-14						
Collector's Name	Nesbitt						
Date & Time Collected	01/16/97 @ 1150						
Sample Type (composite or grab)	Grab						
Analyst	J. Moore						
Date of Extraction / Initials	01/30/97 JM						
Date of Analysis	01/30/97						
Sample Matrix	Soil						
Dilution	X 5						
Compound	1-	70380	Det.	Flags			
Name		units	Limit				
Benzene	BDL	ug/Kg	5				
Ethylbenzene	BDL	ug/Kg	10				
Toluene	BDL	ug/Kg	20				
m,p-Xylene	BDL	ug/Kg	20				
o-Xylene	BDL	ug/Kg	10				
Naphthalene	BDL	ug/Kg	20				

SURROGATE SPIKE RECOVERIES

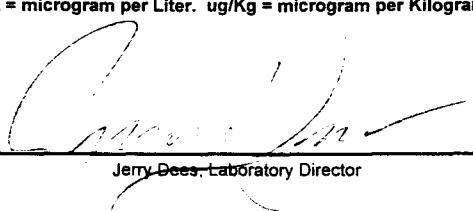
	Acceptance Limits	Percent Recovery
1,2-Dichloroethane-d4	75-133	114
Toluene-d8	86-119	108
Bromofluorobenzene	85-116	101

Explanation of Flags:

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by :


Jerry Dees, Laboratory Director

Date: 2/10/97

Report Generated

Navy Public Works Center

Environmental Laboratory

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 NAS Pensacola, FL 32508
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 FAX (904) 452-2799/2387

Client: SPORTEENVDETCHASN Lab
 Address: 1899 North Hobson Ave.
 N. Charleston, S.C. 29405-2106
 Phone #: (803) 743-3239 ext. 26
 Contact: Fred McLean

Analytical Report

610 PAH's by Method 8270

Lab Report Number: 70380
 Sample Date: 01/16/97
 Received Date: 01/22/97
 Sample Site: Char. Naval Station, S.C.
 Job Order No.: 127 4021

LAB Sample ID#	1-	70380					
Sample Name / Location	97CNS006-8 UST NS28B-14						
Collector's Name	Nesbitt						
Date & Time Collected	01/16/97 @ 1150						
Sample Type (composite or grab)	Grab						
Analyst	M. Chambers						
Date of Extraction / Initials	01/29/97 JJ						
Date of Analysis	02/06/97						
Sample Matrix	Soil						
Dilution	X 2						
Compound Name	1-	70380	units	Det. Limit Flags			
Acenaphthene	BDL	ug/Kg	320				
Acenaphthylene	BDL	ug/Kg	380				
Anthracene	BDL	ug/Kg	340				
Benzo(a)anthracene	BDL	ug/Kg	320				
Benzo(a)pyrene	BDL	ug/Kg	360				
Benzo(b)fluoranthene	BDL	ug/Kg	320				
Benzo(g,h,i)perylene	BDL	ug/Kg	360				
Benzo(k)fluoranthene	BDL	ug/Kg	420				
Chrysene	BDL	ug/Kg	340				
Dibenz(a,h)anthracene	BDL	ug/Kg	340				
Fluoranthene	BDL	ug/Kg	360				
Fluorene	BDL	ug/Kg	320				
Indeno(1,2,3-cd)pyrene	BDL	ug/Kg	360				
1-Methylnaphthalene *	BDL	ug/Kg	400				
2-Methylnaphthalene	BDL	ug/Kg	440				
Naphthalene	BDL	ug/Kg	320				
Phenanthrene	BDL	ug/Kg	360				
Pyrene	BDL	ug/Kg	400				

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Nitrobenzene- d5	23-120	44
2-Fluorobiphenyl	30-115	49
Terphenyl -d14	18-137	34

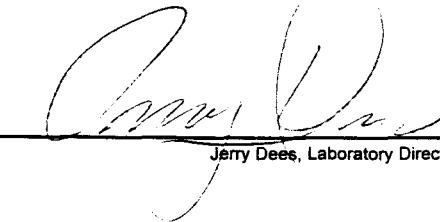
COMMENTS :

BDL = Below Detection Limit.

ug/L = microgram per Liter. ug/Kg = microgram per Kilogram.

* = FL HRS certification pending.

Approved by :


Jerry Dees, Laboratory Director

Date: 2/7/97

Report Generated

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

NPWC Environmental Laboratory

Bldg. 3857, Code 920
NAS Pensacola, Fl. 32508
Phone: (904) 452-4728/3642
DSN: 922-4728/3642
FAX: (904) 452-2799/2387

Requester:

SPORTENVDETCHASN Lab

Address:

1899 North Hobson Avenue

Report Required? No

QC Report? Yes

No

Phone #:

N. Charleston, S.C. 29405-2106

Contact:

(803) 743-3239 ext. 26

Mr. Fred McLean

Job Order #:

Lab ID Number:

1-16-97

Sample Date:

1-22-97

Received Date:

CHAS NAVAL STATION

Sample Site:

Lab Due Date:

Notes:

Sample ID #	Lab	#1-70371	#2-7-0378	#3-7-0379	#4-7-0380					
Sample Name or Location	97CN5006-5 UST NS28B-11	97CN5006-6 UST NS28B-12	97CN5006-7 UST NS28B-13	97CN5006-8 UST NS28B-14						
Sampled by	NCS674+	NCS674+	NCS674+	NCS674+						
Collection	Date	1/16/97	1/16/97	1/16/97	1/16/97					
Date/Time	Time	1100	1117	1135	1150					
Sample Matrix	Soil	Soil	Soil	Soil						
GROUP PARAMETERS by Method Name	METHOD #	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	Billing Units	Containers Liquid/Solid	Preservative(s) Used (Liquids)
HW Charact. (complete)	EPA SW 846							58.5	See below	See below
Ignitability (Flashpoint)	SW 846 1010							1	250ml/4 oz.	4°C
Reactivity (Cyanide & Sulfide)	EPA SW-846							4	1L/4 oz.	4°C
Corrosivity (pH)	SW 846 9040/9045							0.5	250ml/4 oz.	4°C
Toxicity (TCLP) complete	EPA SW-846							53	See below	See below
Toxicity (TCLP) complete	EPA SW-846							53	See below	See below
Toxicity (TCLP) less Pest/Herb	EPA SW-846							36	See below	See below
TCLP BNA Extractables	SW 846 8270							18	1Lx3/4 oz.	4°C
TCLP Acid Extractables	SW 846 8270							8	1Lx3/4 oz.	4°C
TCLP B/N Extractables	SW 846 8270							10	1Lx3/4 oz.	4°C
TCLP Pesticides	SW 846 8080							8.5	1Lx3/4 oz.	4°C
TCLP Herbicides	SW 846 8150							8.5	1Lx3/4 oz.	4°C
TCLP Volatiles	SW 846 8280							10	40 ml x 4/4 oz.	4°C
TCLP Metals (6)	EPA SW-846							10	500 ml/4 oz.	4°C
F001 - F005 Solvents	EPA SW-846							24	1Lx2&40mbx3/16 oz.	4°C
Total Volatiles	SW 846 8280							7.5	40 mbx4/4 oz.	HCl to pH<2/4°C
STEX & Naphthalene	SW 846 8280	X	97CN5006-5	X	97CN5006-6	X	97CN5006-7	X	97CN5006-8	5
Total BNA Extractables	SW 846 8270							16	1Lx2/16 oz.	4°C
PAH's	SW 846 8270	X	97CN5006-5	X	97CN5006-6	X	97CN5006-7	X	97CN5006-8	9
PCB's in Oil	SW 846 8080							3	40 ml/4 oz.	None
PCB's in Water/Soil/Wipes	SW 846 8080							4	1L/4 oz.	None
Total RCRA Metals (6)	EPA SW-846							6	500 ml/4 oz.	HNO ₃ to pH<2
Asbestos (Bulk)								0.5	Ziploc	None
TPH (IR)	EPA 416.1							2	1Lx2/4 oz.	HCl to pH<2/4°C
Oil & Grease	EPA 413.1							2	1Lx2/4 oz.	HCl to pH<2/4°C
Lead in Paint	SW 846 8010							1	Ziploc	None
Total Organic Halogens	EPA SW-846							4	250ml(A)x2/4 oz.	4°C
Other:										
Comments:	<i>1st. 2. Received 1-16-97 1430 Received by: Fred McLean 1-16-97 @ 1430 hrs.</i>									

Relinquished by:

Fred McLean

Received by:

G. Alexander

Date/Time:

1/21/97 @ 0840 hrs.

Date/Time:

1-22-97 1130

**Navy Public Works Center
Environmental Laboratory**

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642
FAX 452-2783

Client: SPORTENVDETCHASN Lab
Address: 1899 North Hobson Ave.
N. Charleston, S.C. 29405-2106
Phone #: (803) 743-3239 ext. 26
Contact: Fred McLean

Analytical Report

**BETX & Naphthalene
by Method 8260**

Lab Report Number:	70381
Sample Date:	01/16/97
Received Date:	01/22/97
Sample Site:	Char. Naval Station, S.C.
Job Order No.:	127 4021

LAB Sample ID#	1- 70381			
Sample Name / Location	97CNS006-9 UST NS28B-15 Dirt Pile			
Collector's Name	Nesbitt			
Date & Time Collected	01/16/97 @ 1210			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of Extraction / Initials	01/30/97 JM			
Date of Analysis	01/30/97			
Sample Matrix	Soil Composite			
Dilution	X 1			
Compound	1- 70381	units	Det. Limit	Flags
Name				
Benzene	BDL	ug/Kg	1	
Ethylbenzene	BDL	ug/Kg	2	
Toluene	BDL	ug/Kg	4	
m,p-Xylene	BDL	ug/Kg	4	
o-Xylene	BDL	ug/Kg	2	
Naphthalene	BDL	ug/Kg	4	

SURROGATE SPIKE RECOVERIES

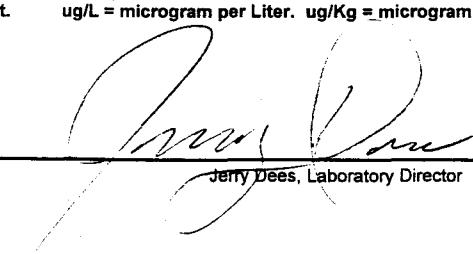
	Acceptance Limits	Percent Recovery
1,2-Dichloroethane-d4	75-133	118
Toluene-d8	86-119	108
Bromofluorobenzene	85-116	95

Explanation of Flags:

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by :


Jerry Dees, Laboratory Director

Date: 2/7/97
Report Generated

Navy Public Works Center

Environmental Laboratory

Bldg. 3887, Code 920
 NAS Pensacola, FL 32508
 Phone (904) 452-4728/3642
 DSN 922-4728/3642
 FAX (904) 452-2799/2387

Client: SPORTENVDETCHASN Lab
 Address: 1899 North Hobson Ave.
 N. Charleston, S.C. 29405-2106
 Phone #: (803) 743-3239 ext. 26
 Contact: Fred McLean

Analytical Report

610 PAH's by Method 8270

Lab Report Number: 70381
 Sample Date: 01/16/97
 Received Date: 01/22/97
 Sample Site: Char. Naval Station, S.C.
 Job Order No.: 127 4021

LAB Sample ID#	1-	70381					
Sample Name / Location	97CNS006-9 UST NS28B-15 Dirt Pile						
Collector's Name	Nesbitt						
Date & Time Collected	01/16/97 @ 1210						
Sample Type (composite or grab)	Grab						
Analyst	M. Chambers						
Date of Extraction / Initials	01/29/97 JJ						
Date of Analysis	02/04/97						
Sample Matrix	Soil Composite						
Dilution	X 5						
Compound Name	1-	70381	units	Det. Limit			
Acenaphthene	BDL	ug/Kg	800				
Acenaphthylene	BDL	ug/Kg	950				
Anthracene	BDL	ug/Kg	850				
Benzo(a)anthracene	BDL	ug/Kg	800				
Benzo(a)pyrene	BDL	ug/Kg	900				
Benzo(b)fluoranthene	BDL	ug/Kg	800				
Benzo(g,h,i)perylene	BDL	ug/Kg	900				
Benzo(k)fluoranthene	BDL	ug/Kg	1050				
Chrysene	BDL	ug/Kg	850				
Dibenz(a,h)anthracene	BDL	ug/Kg	850				
Fluoranthene	BDL	ug/Kg	900				
Fluorene	BDL	ug/Kg	800				
Indeno(1,2,3-cd)pyrene	BDL	ug/Kg	900				
1-Methylnaphthalene *	BDL	ug/Kg	1000				
2-Methylnaphthalene	BDL	ug/Kg	1100				
Naphthalene	BDL	ug/Kg	800				
Phenanthrene	BDL	ug/Kg	900				
Pyrene	BDL	ug/Kg	1000				

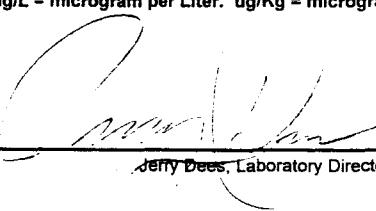
SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Nitrobenzene- d5	23-120	38
2-Fluorobiphenyl	30-115	61
Terphenyl -d14	18-137	56

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by:


Jerry Dees, Laboratory Director

Date: 2/11/97

Report Generated

Navy Public Works Center

Environmental Laboratory

Bldg. 3887, Code 920
 NAS Pensacola, FL 32508 - 6500
 Phone (904) 452-4728/3642
 DSN 922-4728/3642
 FAX 452-2783

Client: SPORTEENVDETCHASN Lab
 Address: 1899 North Hobson Ave.
 N. Charleston, S.C. 29405-2106
 Phone #: (803) 743-3239 ext. 26
 Contact: Fred McLean

Analytical Report

BETX & Naphthalene by Method 8260

Lab Report Number:	70382
Sample Date:	01/16/97
Received Date:	01/22/97
Sample Site:	Char. Naval Station, S.C.
Job Order No.:	127 4021

LAB Sample ID#	1- 70382			
Sample Name / Location	97CNS006-10 UST NS28B VOA Trip Blank			
Collector's Name	Nesbitt			
Date & Time Collected	01/16/97 @ 1130			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of Extraction / Initials	01/30/97 JM			
Date of Analysis	01/30/97			
Sample Matrix	Soil			
Dilution	X 1			
Compound	1- 70382	units	Det.	Flags
Name				
Benzene	BDL	ug/Kg	1	
Ethylbenzene	BDL	ug/Kg	2	
Toluene	BDL	ug/Kg	4	
m,p-Xylene	BDL	ug/Kg	4	
α -Xylene	BDL	ug/Kg	2	
Naphthalene	BDL	ug/Kg	4	

SURROGATE SPIKE RECOVERIES

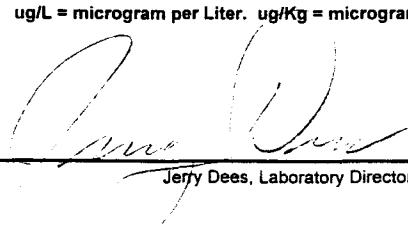
	Acceptance Limits	Percent Recovery
1,2-Dichloroethane-d4	75-133	120
Toluene-d8	86-119	101
Bromofluorobenzene	85-116	100

Explanation of Flags:

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by :


Jerry Dees, Laboratory Director

Date: 2/7/97

Report Generated

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

NPWC Environmental Laboratory

Bldg. 3857, Code 920

NAS Pensacola, FL 32508

Phone: (904) 452-4728/34/2

DSN: 922-1728/2842

FAX: (904) 453-2798/2817

Remember

Address:

卷之三

Contents

SPORTENVDETCHASN Lab

Report Required?

16

• QC Report?

Yes **No**

Lab ID Number:

Samples Data:

Background Data

Sample Sites

Last Run Date:

Comments:

2d. 2. Shultz 1-16-97 1420 Received by J. D. Sweeney
116162 11630 1425

Partnerships and Ideas

~~Feb 8ndans, Jr.~~

DateTimes

1/21/97 @ 0504 hrs.

Received by

B. Leyndafur
-27-07 11BD

Date/Time: 1-22-97 11:30



GENERAL ENGINEERING LABORATORIES

Meeting today's needs with a vision for tomorrow.

Laboratory Certifications

STATE	GML	EP
FL	E87156/E87294	E87472/E87458
NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hicks

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: January 30, 1997

Page 1 of 2

Sample ID	:	SPORT0312-1
Lab ID	:	9701379-01
Matrix	:	Soil
Date Collected	:	01/21/97
Date Received	:	01/21/97
Priority	:	Routine
Collector	:	Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
<i>BTEX - 4 items</i>											
Benzene	U	0.00	1.00	2.00	ug/kg	1.0	JAC	01/28/97	1354	97025	1
Ethylbenzene	U	0.00	1.00	2.00	ug/kg	1.0					
Toluene	U	0.00	1.00	2.00	ug/kg	1.0					
Xylenes (TOTAL)	U	0.00	1.00	4.00	ug/kg	1.0					
Naphthalene	U	0.00	1.00	2.00	ug/kg	1.0					
Extractable Organics											
<i>Polynuclear Aromatic Hydrocarbons - 16 items</i>											
Acenaphthene	U	0.00	165	330	ug/kg	1.0	JCB	01/29/97	1526	96986	2
Acenaphthylene	U	0.00	165	330	ug/kg	1.0					
Anthracene	U	0.00	165	330	ug/kg	1.0					
Benzo(a)anthracene	U	0.00	165	330	ug/kg	1.0					
Benzo(a)pyrene	U	0.00	165	330	ug/kg	1.0					
Benzo(b)fluoranthene	U	0.00	165	330	ug/kg	1.0					
Benzo(ghi)perylene	U	0.00	165	330	ug/kg	1.0					
Benzo(k)fluoranthene	U	0.00	165	330	ug/kg	1.0					
Chrysene	U	0.00	165	330	ug/kg	1.0					
Dibeno(a,h)anthracene	U	0.00	165	330	ug/kg	1.0					
Fluoranthene	U	0.00	165	330	ug/kg	1.0					
Fluorene	U	0.00	165	330	ug/kg	1.0					
Indeno(1,2,3-c,d)pyrene	U	0.00	165	330	ug/kg	1.0					
Naphthalene	U	0.00	165	330	ug/kg	1.0					
Phenanthrene	U	0.00	165	330	ug/kg	1.0					
Pyrene	U	0.00	165	330	ug/kg	1.0					

The following prep procedures were performed:

GC/MS Base/Neutral Compounds

MS 01/28/97 1530 96986 3

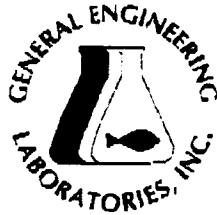
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9701379-01

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GENERAL ENGINEERING LABORATORIES

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Laboratory Certifications

STATE	GEL	EP
FL	BR7156/BR7294	BR7472/BR7458
NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: January 30, 1997

Page 2 of 2

Sample ID : SPORT0312-1			
Surrogate Recovery	Test	Percent%	Acceptable Limits
2-Fluorobiphenyl	M610	77.4	(30.0 - 115.)
Nitrobenzene-d5	M610	64.8	(23.0 - 120.)
p-Terphenyl-d14	M610	77.8	(37.3 - 128.)
Bromofluorobenzene	BTEX-8260	114.	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	71.0	(63.4 - 136.)
Toluene-d8	BTEX-8260	101.	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	114.	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	71.0	(63.4 - 136.)
Toluene-d8	NAP-8260	101.	(72.1 - 137.)

M = Method	Method-Description
M 1	EPA 8260
M 2	EPA 8270
M 3	EPA 3550

Notes:

The qualifiers in this report are defined as follows:

ND indicates that the analyte was not detected at a concentration greater than the detection limit.

J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).

U indicates that the analyte was not detected at a concentration greater than the detection limit.

* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

This data report has been prepared and reviewed
in accordance with General Engineering Laboratories
standard operating procedures. Please direct
any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

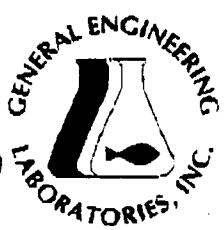
Karen Blakeney
Reviewed By

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STATE	GEL	EPI
FL	E87156/E7294	E87472/E7458
NC	233	
SC	10120	10582
TN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106
Contact: Mr. Bill Hiers
Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: January 30, 1997

Page 1 of 2

Sample ID : SPORT0312-2
Lab ID : 9701379-02
Matrix : Soil
Date Collected : 01/21/97
Date Received : 01/21/97
Priority : Routine
Collector : Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
Volatile Organics											
<i>BTEX - 4 items</i>											
Benzene	U	0.00		1.00	ug/kg	1.0	JAC	01/29/97	1335	97025	1
Ethylbenzene	U	0.00		1.00	ug/kg	1.0					
Toluene	U	0.00		1.00	ug/kg	1.0					
Xylenes (TOTAL)	U	0.00		1.00	4.00 ug/kg	1.0					
Naphthalene	U	0.220		1.00	ug/kg	1.0					

Surrogate Recovery	Test	Percent%	Acceptable Limits
Bromofluorobenzene	BTEX-8260	121.	(53.5 - 154.)
Dibromofluoromethane	BTEX-8260	72.9	(63.4 - 136.)
Toluene-d8	BTEX-8260	108.	(72.1 - 137.)
Bromofluorobenzene	NAP-8260	121.	(53.5 - 154.)
Dibromofluoromethane	NAP-8260	72.9	(63.4 - 136.)
Toluene-d8	NAP-8260	108.	(72.1 - 137.)

M = Method	Method-Description
M 1	EPA 8260

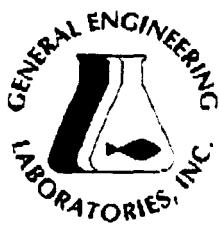
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STATE	CIL	EPI
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NC	233	
SC	10120	10582
IN	02934	02934

Client: Supervisor of Ship Building & Conversion
SUPSHIP-Portsmouth Detachment-Env.
1899 North Hobson Ave.
North Charleston, South Carolina 29405-2106

Contact: Mr. Bill Hiers

Project Description: SUPSHIP-Portsmouth Detachment

cc: NPWC00196

Report Date: January 30, 1997

Page 2 of 2

Sample ID : SPORT0312-2

M = Method

Method-Description

Notes:

The qualifiers in this report are defined as follows:

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in accordance with General Engineering Laboratories
standard operating procedures. Please direct
any questions to your Project Manager, Karen Blakeney at (803) 769-7386.

Reviewed By

Karen Blakeney

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CHAIN OF CUSTODY RECORD

Page 1 of 1

9701379

General Engineering Laboratories, Inc.
2040 Savage Road
Charleston, South Carolina 29414
P.O. Box 30712
Charleston, South Carolina 29417
(803) 556-8171

Client Name/Facility Name SPORTENVDETCHASN				SAMPLE ANALYSIS REQUIRED (x) - use remarks area to specify specific compounds or methods																					
Collected by/Company SPORTENVDETCHASN				Use F or P in the boxes to indicate whether sample was filtered and/or preserved ←																					
SAMPLE ID	DATE	TIME	# OF CONTAINERS	WELL	SOIL	COMP	GRAB	pH, conductivity	TOC/DOC	TOX	Chloride, Fluoride, Sulfide	Nitrite/Nitrate	VOC - Specify Method required	METALS - specify	Pesticide	Herbicide	Total Phenol	Acid Extractables	B/N Extractables	PCB's	Cyanide	Coliform - specify type	PAN	STOX & NAPTH	Remarks
SPORT#312-1	1/21/97	1035	X X 2																					X X	UST NS28-16 SOIL
SPORT#312-2	1/21/97	0830	X X 1																					X	UST NS28 TRIP BLANK SOIL
Relinquished by: <i>J. A. Henderson</i>				Date: 1/21/97	Time: 1300	Received by: <i>Bob Blakely Jr.</i>	Relinquished by: <i>Bob Blakely Jr.</i>												Date: 1/21/97	Time: 1435	Received by: <i>Robert Henderson</i>				
Relinquished by: <i>Euston Henderson</i>				Date: 1/21/97	Time: 15:24	Received by lab by: <i>Karen Blakely</i>	Date: 1/21/97	Time: 15:24	Remarks: <i>Temp 8°C</i>																

Relinquished by:

Date

Date:

Received by

Relinquished by:

Date:

Time:

Time: **Received by:**

blood

1

100

— 9 —

— 1 —

1

1

• 13 •

White = sample collector

Yellow = file

Pink ≡ with report

Attachment III

Certificate of Disposal (tanks)

UST Certificate of Disposal

CONTRACTOR

Supervisor of Shipbuilding, Conversion and Repair, USN
Portsmouth, VA
Environmental Detachment Charleston
1899 North Hobson Avenue
North Charleston 29405-2106

Telephone (803) 743-6482

TANK ID & LOCATION

NS28A; Building NS 28, Thompson Ave., Charleston Naval Base, N. Charleston, SC

DISPOSAL LOCATION

Bldg. 1601 Tank Cleaning
& Disposal Area
Charleston Naval Complex

<u>TYPE OF TANK</u>	<u>SIZE (GAL)</u>
---------------------	-------------------

Fuel oil	10,000 gal.
----------	-------------

CLEANING/DISPOSAL METHOD

The tank was cut open on both ends, cleaned with a steam cleaner, cut into sections, and disposed of as recyclable scrap metal.

DISPOSAL CERTIFICATION

I certify that the above tank has been properly cleaned and disposed of as recyclable scrap metal.

7-8-97
Sidney C. Dawson (Date)

UST Certificate of Disposal

CONTRACTOR

Supervisor of Shipbuilding, Conversion and Repair, USN
Portsmouth, VA
Environmental Detachment Charleston
1899 North Hobson Avenue
North Charleston 29405-2106

Telephone (803) 743-6482

TANK ID & LOCATION

NS28B; Building NS 28, Thompson Ave., Charleston Naval Base, N. Charleston, SC

DISPOSAL LOCATION

Bldg. 1601 Tank Cleaning
& Disposal Area
Charleston Naval Complex

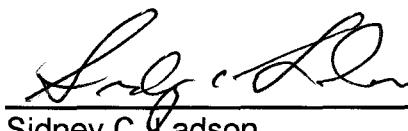
<u>TYPE OF TANK</u>	<u>SIZE (GAL)</u>
Fuel oil	4,000 gal.

CLEANING/DISPOSAL METHOD

The tank was cut open on both ends, cleaned with a steam cleaner, cut into sections, and disposed of at the local municipal landfill.

DISPOSAL CERTIFICATION

I certify that the above tank has been properly cleaned and disposed of.


_____, 7-8-97

Sidney C. Ladson (Date)